

Anna CARDINALETTI

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| IMPERSONAL CONSTRUCTIONS |
| AND SENTENTIAL ARGUMENTS |
| IN GERMAN |

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INTRODUCTION

In the framework of Government and Binding Theory as developed in the eighties, the main focus of interest has shifted to the so-called principles-and-parameters approach. On the one hand, the search for invariant, universal principles has replaced the formulation of construction-specific rules. Grammar has become a highly abstract and sophisticated system of interacting principles which are thought to characterize the language faculty and be common to human languages. On the other hand, the interest in comparative research has considerably increased in the last few years. Linguistic theory must not only account for the similarities among languages but also explain how languages differ. The differences among languages are regarded as the consequence of the setting of parameters, i.e. of options which are left open by Universal Grammar and are fixed by the language learner through the particular linguistic experience to which he/she is exposed. It is clear that the increase in the empirical basis of the theory also poses new questions for linguistic research and opens new perspectives to inquiry, while suggesting a rethinking of results already attained.

The present work could only develop in this framework. On the one hand, it represents an example of how a more abstract approach can explain more things and in a simpler manner than an approach in terms of rules and construction-specific statements. On the other hand, it shares that interest for less studied languages such as German, which has increased in the last years and has received much attention in our country.

A very intriguing fact in the grammar of German is the distribution of the pronoun *es* in subject position. It appears to be obligatory, impossible or optional, depending on the construction in which it occurs:

- (1) a. Gestern war *(es) geschlossen.
yesterday was it closed
- b. Gestern hat *(es) geregnet.
yesterday has it rained
- c. Hier tanzt *(es) sich gut.
here dances it **SICH** well
- d. Gestern hat *(es) unsere Theorie bewiesen, daß er aufgegeben hat.
yesterday has it our theory proved that he given up has

- (2) a. Gestern wurde (*es) getanzt.
yesterday was it danced
- b. Gestern wurde (*es) ein Buch gekauft.
yesterday was it a book bought
- (3) a. Gestern wurde (es) allen mitgeteilt, daß der Professor nicht
kommen wollte.
yesterday was it to-everybody said that the professor not come
wanted
- b. Jetzt friert (es) mich.
now is-cold it me (= "I am cold now")

The picture is further complicated by the fact that *es* becomes obligatory also in (2) and (3) when it occurs in sentence-initial position:

- (4) a. *(Es) wurde gestern getanzt.
b. *(Es) wurde gestern ein Buch gekauft.
- (5) a. *(Es) wurde gestern allen mitgeteilt, daß der Professor nicht
kommen wollte.
b. *(Es) friert mich.

Any attempt which tries to give a semantic account for this distribution or to formulate construction-specific rules is doomed to failure. It is clear that the presence of *es* does not depend on semantic factors. (1c) and (2a) have roughly the same meaning, still *es* is obligatory in the former and impossible in the latter. Neither does the distribution of *es* depend on the verbal voice. The verb is passive both in (2a) and (3a), but *es* is impossible in the first sentence and optional in the second. *Es* also does not depend on the presence of an extraposed clause: *es* is obligatory in (1d) while optional in (3a).

Some more abstract property must differentiate among (1), (2) and (3); a property that is part of the knowledge of the speaker of German and must be available to the child who is acquiring German.

The main goal of this work is to show that the constructions in (1) share one crucial feature: in each case, *es* is an argument, i.e. it is assigned a θ -role. Since German is not a null-subject language like Italian or Spanish, the θ -role must be borne by a lexical pronoun and cannot be borne by a null pronominal, i.e. a pronoun which is not lexically realized. Hence the

obligatory presence of *es*.

Exactly the opposite is true for (2), where there is no θ -role available and only an empty pronominal can occur. We analyse this empty category as a non-argumental (expletive) *pro*. Since German allows for a non-argumental null subject, the occurrence of the lexical pronoun in the same position is barred by the Avoid Pronoun Principle. Nothing else need be added.

Since, however, a null pronominal is not possible in sentence-initial position, its lexical counterpart *es* will appear in (4). This turns out to be the only instance of lexical expletive in German. We depart from current analyses of sentence-initial *es* as a surface adjustment particle inserted in specC' in order to fulfill the verb-second requirements. The analysis of sentence-initial *es* as a lexical expletive moved from specI' has important theoretical consequences. On the one hand, it provides an argument that specI' is present even if not lexically realized. On the other hand, given that *es* is lexical and requires a Case, our analysis also strongly supports the partitive hypothesis, according to which a Case other than nominative is assigned to a VP-internal subject.

One advantage of this analysis is that it is sufficient to assume two uses of the morpheme *es*: an argumental use and a non-argumental use. No further distinction is necessary. Furthermore, the complementary distribution of *es* and *pro* in (1) and (2) receives a principled account. It is nothing else than the effect of the interaction of the principles which account for the occurrence of lexical and null pronouns: the licensing conditions of null pronominals, which are parametrized across languages, and the Avoid Pronoun Principle which is a good candidate for Universal Grammar.

It is now clear that the theoretical framework we have outlined can allow us to account for the problematic cases in (3), where *es* seems to be optional. We are now in a position to argue that *es* in (3) is an argument when it occurs. Different principles will apply when it occurs and when it is absent, so that its optionality is only apparent. No principle which aims for explanatory force can apply optionally.

The greatest advantage of this analysis can be seen in the unitary characterization that can be given to a sentence-internal *es*. In this position, it can only be an argument.

The work is organized as follows. In Chapter one, we will present the central idea that the complementary distribution of *es* and *pro* follows from general principles and cannot be expressed in construction-specific terms. We will also propose a partial reformulation of the licensing conditions of null pronominals. Some comparisons with Italian and with other Germanic languages will be used to support the analysis.

The topic of Chapter two is the impersonal middle construction in (1c). We will provide evidence that the sentence is derived by middle formation, without however dethematizing the subject position (on the other hand, middles formed from transitives involve such an operation of dethematization). The external θ -role is borne by the argument *es*, which turns out to be the lexical equivalent of Italian arbitrary *pro*. The discussion will be extended to other constructions involving arbitrary pronouns, such as impersonal passives and the clausal complement of causative and perception verbs.

In Chapter three, we will discuss empirical evidence with a twofold purpose: we will show 1) that *es* is an argument and not an expletive when it cooccurs with an embedded clause as in (3a), and 2) that when *es* does not occur, its position is not occupied by a null pronoun. The discussion will also provide some insights into the correct analysis of the clausal complement of factive verbs.

Chapter four will investigate the argument structure of impersonal psych verbs like the one in (3b). We will be able to show that *es* is an argument and not an expletive, here too. The quasi- θ -role assigned to *es* can also be borne by a null pronominal, which represents the only instance of a null quasi-argument in German. We will try to give a principled account of this unexpected occurrence of quasi-argumental *pro* in German and of the fact that the lexical and the null quasi-argument appear to have the same distribution in this configuration.

CHAPTER ONE

ARGUMENTAL *ES* VS. NON-ARGUMENTAL *PRO*

1.1. Argumental "es"

1.1.1. Fully argumental "es"

Instances of argumental *es* can be found in both subject and object position:

- (1) (Sein Buch ist sehr interessant).
his book is very interesting.
 - a. Leider hat es/ *pro sehr schlechte Bilder.
unfortunately has it very bad illustrations
 - b. Ich habe es/*pro gestern gelesen.
I have it yesterday read
- (2) (Sein Kind ist sehr schön).
his child is very nice.
 - a. Gestern hatte es/ *pro eine Prüfung.
yesterday had it an exam
 - b. Ich habe es/ *pro in der Schule getroffen.
I have it at the school met

It is impossible to leave *es* out in sentences like (1) and (2). This follows directly from the θ -criterion. The subject and object θ -roles must be borne by an argument. Since German is neither a null-subject language like for example Italian or Spanish (see 1.2.2.), nor a null-object language like those discussed in Cole (1987), it is not possible for such a θ -role to be borne by an empty pronominal.⁽¹⁾ Hence the obligatory presence of *es*.

1.1.2. Quasi-argumental "es"

1.1.2.1. Weather "es"

Chomsky (1981:324f) argues for the argumental status of the subject of weather predicates. Like true arguments, weather-*it* can occur in control

structures, where it may behave as an antecedent for the PRO subject of the infinitival clause. This is illustrated in (3):

- (3) *It* sometimes rains after *PRO* snowing.

In this respect, the subject of a weather verb differs from non-arguments which cannot control and cannot be controlled:

- (4) a. **It* seems that John is intelligent without *PRO* being obvious that he is.
 b. *It is true that John is intelligent without *PRO* seeming that he is.

However, weather-*it* differentiates from true arguments in that it is not referential, i.e. it denotes no member of D, D being "a domain of individuals that serve as values of variables and as denotata". As a consequence, (5) is ungrammatical:

- (5) *What rains?

In order to account for this intermediate status of weather-*it*, Chomsky suggests considering it as a quasi-argument.

The subjects of weather verbs in German have similar properties. They cannot be questioned, but can control a PRO in the embedded clause, provided that the same quasi-argument is present in the two clauses:⁽²⁾

- (6) *Was regnet?
- (7) a. *Es* regnet ohne *PRO* zu hageln.
 it rains without to hail
 b. *Es* ist kalt ohne *PRO* zu kalt zu sein.
 it is cold without too cold to be
 c. *Es* ist spät ohne *PRO* zu spät zu sein.
 it is late without too late to be

Instead, a non-argument like the one which occurs in impersonal passives (cf. 1.2.) cannot control:

- (8) *Gestern wurde *pro* gesprochen ohne *PRO* diskutiert zu werden.
 yesterday was spoken without discussed to be

A third property of quasi-arguments is that they cannot be controlled by an arbitrary element, given that the arbitrary reading is restricted to humans (cf. Epstein 1984 for the suggestion that arbitrary PRO is PRO controlled by an empty category receiving universal quantifier interpretation):

- (9) *Es ist schön, PRO zu regnen.
it is nice to rain

(cf. Es ist schön, daß es regnet.)
it is nice that it rains

Since argumenthood is the relevant factor for the distribution of pronoun *es* in German, we expect weather-*es* to pattern with argumental *es* (cf. 1.1.1.1.). As expected, *es* is obligatory with weather predicates: Since German is not a null subject-language like Italian, the quasi-argumental θ -role cannot be borne by a null pronominal (see, however, Chapter 4 for an instance of quasi-argumental *pro* in German):

- (10) a. Gestern hat es/ *pro geregnet/ geschneit.
yesterday has it rained/ snowed
- b. Jetzt ist es/ *pro kalt/ spät.
now is it cold/ late
- c. Bald keimt es/ *pro.
soon sprouts it

1.1.2.2. Idiomatic "es"

Since NPs in idiom chunks behave like weather-*it* in that they can be the antecedent of a pronoun, Chomsky (1981:324f) extends the status of quasi-argument to these NPs:

- (11) Care was taken of the orphans, but it was insufficient.

In German, we find many instances of idiomatic-*es*, both in subject and object position. Some examples are given in (12) and (13):

- (12) a. Hier spukt es/ *pro.
here spooks it

- b. Hier fehlt es/ *pro an allem.
here is-lacking it in everything
- c. Hier handelt es/*pro sich um meine Zukunft.
here is-a-matter it SICH of my future
- (13) a. Er hat es/ *pro schlecht.
he has it bad
- b. Franz hält es/ *pro nicht mit Rainer.
F. can-do it not with R.

Like argumental *es* and quasi-argumental weather-*es*, idiomatic-*es* is obligatory and cannot be replaced by a null pronominal.

1.2. Non-argumental "pro"

We saw in 1.1. that German does not allow null subjects as Italian and Spanish do. In German, argumental and quasi-argumental θ -roles cannot be borne by null pronominals. However, there is an instance of null subject in German: an empty pronominal is possible if it does not bear any θ -role, i.e. if it is generated in a $-\theta$ position. German differs in this respect from English, where the subject position is always filled:

- (14) a. *I know that came a man yesterday.
b. I know that there came a man yesterday.

Null subjects are found in German with impersonal passives, (15), and with passive and ergative verbs whose surface subject does not raise to specI', (16) (see among others Sternefeld 1985, Safir 1985, Grewendorf 1986, Tomaselli 1986):

- (15) Hans sagt, daß pro gestern getanzt wurde.
H. says that yesterday danced was
- (16) a. Hans sagt, daß pro gestern ein Mann gekommen ist.
H. says that yesterday a man come is
- b. Hans sagt, daß pro gestern ein Buch gestohlen wurde.
H. says that yesterday a book stolen was

Under the hypothesis that the external argument is projected in a position internal to VP but external to V' (cf. Sportiche 1988a among others), and that the subject of an unergative verb can also fail to raise to specI' in German, we expect (17) to pattern with (15)-(16). This is indeed the case:

- (17) a. Hans sagt, daß pro gestern ein Mann angerufen hat.
 H. says that yesterday a man phoned has
- b. Hans sagt, daß pro ihn gestern ein Mann betrogen hat.
 H. says that him yesterday a man swindled has

It is usually assumed that the presence of an empty subject position in (15)-(17) is forced by the Extended Projection Principle of Chomsky (1982), which requires that a sentence must have a structural subject position at every syntactic level. Notice however that under the more recent proposals that the thematic position of the external argument is inside the VP, the specI' position is always a $-\theta$ position. The Extended Projection Principle does not match any longer with the Projection Principle as far as a thematic subject is concerned. The two principles simply state different things. It would be more desirable to make the obligatoriness of a structural subject derive from a more general property, which can follow from X' theory: functional heads like I° and C° always project a specifier position.⁽³⁾

It is also possible to construct empirical evidence for the presence of the subject position when it is not lexically realized, as is the case in (15)-(17) in German.

An interesting argument discussed by Grewendorf (1988) is the following. Given the fact that in German NP-movement is not obligatory and the subject NP can remain in VP-internal position (see above (16)), one would expect that a parasitic gap would be possible in a passive clause in German, similarly to the grammatical object case. This is however excluded, as shown by the contrast in (18):

- (18) a. Ein Mann, *den* Hans [ohne *e* zu kennen] *t* eingeladen hat,..
 a man whom H. without to know invited has
- b. *Ein Mann, *der* [ohne *e* zu kennen] *t* eingeladen wurde, ..
 a man who without to know invited was

This can be used as evidence that a subject position (specI') is available and indeed occupied by the thematic NP after expletive replacement at LF (see Chomsky 1986a and 1988), which causes the violation of the

anti-c-command requirement on parasitic gaps and the ungrammaticality of the sentence.

Another piece of evidence is provided by (19):

- (19) *[Klar zu sein, daß er recht hat] ärgert uns alle.
clear to be that he right has irritates us all

Under the hypothesis that clauses do not require Case, the ungrammaticality of the sentence only follows if a subject position in the infinitival clause is assumed: Given that PRO cannot be expletive, probably due to its anaphoric nature, which requires it to be controlled, the sentence represents a violation of the θ -criterion.

If a subject position is present, the question arises as to which empty category occupies it. Only a [-anaph, +pron] empty category, i.e. *pro* qualifies to occur in specI'.

1.2.1. The licensing conditions of "pro"

As proposed by Rizzi (1986), the theory of *pro* consists of two essential parts, the first being a formal requirement on its structural position, the second an interpretive constraint on the recovery of its content:

- (20) a. *pro* is governed by X°_y .
b. Let X° be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of the features on X° coindexed with it.

The licensing conditions of null pronominals differ crucially from the ECP. Whereas the empty categories subject to the ECP, i.e. non-pronominal empty categories, recover their content from an element other than the head governing them, i.e. their antecedent, the recovery of the feature content of null pronominals depends on the governing head itself. *Pro* must be governed by a head which has the appropriate features for its identification. Furthermore, the set of licensing heads is not identical with the set of proper governors. Just to give an example, the lexical head V° in English head governs a trace but cannot license a null object (cf. Rizzi 1986).

Clause a. of (20) raises the question of how to define government. On the basis of facts from Old French, Adams (1987) suggests defining it in terms of canonical government. In this language, as well as in other Medieval

languages (cf. Vanelli, Renzi, Benincà 1985/86), a referential *pro* is only possible in main clauses, in which the finite verb moves to C°. The fact that the verb canonically governs *pro* only in this configuration explains why a null subject is licensed in main clauses but not in embedded ones:

- (21) Einsi corurent *pro* par mer tant que il vindrent à Cademelée.
 thus ran by sea until they came to Cadmée
 (Adams 1987:2)

Such an account, however, makes wrong predictions as far as SOV languages are concerned, where the canonical direction is from right to left. Under the hypothesis that C° is the licensing head in Bavarian (cf. Bayer 1983/84), German (cf. Tomaselli 1987) and West-Flemish (Bennis and Haegeman 1984), null subjects in specI' are unexpected, being on the wrong side with respect to the governing head. The following sentences illustrate Bavarian and West Flemish, respectively, where an argumental *pro* is possible:

- (22) a. wennst *pro* noch Minga kummst. (Bayer 1983/84:249)
 when-you to Munich come
 b. Kummst *pro* noch Minga?
- (23) a. da-se *pro* goa moeten. (Haegeman 1987a:2)
 that-she goes look
 b. Goa-se *pro* moeten?

In order to account for the Germanic facts, we are therefore compelled to slightly modify Adams' approach and claim that the direction relevant for the licensing requirements is that specified for each (lexical or functional) head. Hence, it follows that C° can license *pro* in specI' even in a SOV language, given that it governs its complement, IP, to the right.

A canonical government approach, however, reveals itself to be inadequate for a non-V/2, SVO language like Italian. In spite of the fact that I° canonically governs to the right in Italian, a null subject is allowed to appear to its left in the specI' position, while it is barred in postverbal position (cf. Travis 1984:208f, Burzio 1986:129f, Rizzi 1987a). An account in terms of directional government, although appealing for the Old French facts, seems unfeasible.

A formulation of (20a) in terms of c-command, which would explain why the inflected verb only licenses *pro* in main clauses in Old French, also fails

when applied to Italian, where clearly I° does not c-command $\text{spec}I'$, still a null subject is allowed to occur in this position.

1.2.2. A parametrization of the licensing conditions of "pro"

In order to account for the occurrences of null subjects across languages, a partial reformulation of (20a) is necessary. We would like to suggest that formal licensing is parallel to Case-assignment in Sportiche's (1988b) proposal. Like Case-assignment, licensing takes place in one of the two following ways: either via government (defined in terms of strict c-command) or via spec-head agreement, the way of licensing being parametrised. In a language like Italian, *pro* in $\text{spec}I'$ is licensed via spec-head agreement with I° , I° being the licensing head. If I° licenses *pro* via government in Old French, a null subject is only possible in main clauses, where the inflected verb enters a government relation with it.⁽⁴⁾ In the Germanic cases exemplified in (22)-(23), no asymmetry is found between embedded and main clauses. C° licenses a null subject via government both in verb-final and verb-second clauses. The following sentences from German also show that C° is a licensing head both when lexical and empty:

(24) a. Ich weiß, *daß* pro getanzt wurde.
I know that danced was

b. Gestern *wurde* pro getanzt.
yesterday was danced

(25) Ich weiß, wo *C* pro getanzt wurde.
I know where danced was

Since C° does not have features to give a content to an argumental *pro* in German, the empty pronominal can only be expletive. An expletive *pro* is in fact a null pronominal without any feature (apart from Case) (see Rizzi 1986). This explains why *pro* is possible in German in sentences like (15)-(17), but excluded in (1a)-(2a), (10) and (12). As shown by (22)-(23), the presence of overt agreement features on C° in Bavarian and West Flemish allows the licensing of a referential null subject in these languages.

1.3. The Avoid Pronoun Principle

It is a well-known fact that *es* cannot occur in sentences like (15)-(17),

repeated here as (26) for convenience:

- (26) a. *Hans sagt, daß es gestern getanzt wurde.
 b. *Hans sagt, daß es gestern ein Mann gekommen ist.
 c. *Hans sagt, daß es gestern ein Buch gestohlen wurde.
 d. *Hans sagt, daß es gestern ein Mann angerufen hat.
 e. *Hans sagt, daß es ihn gestern ein Mann betrogen hat.

In (15)-(17), there is no (external) θ -role available to be borne by *es*. Argumental *es* cannot occur in these configurations without violating the θ -criterion. Only the expletive empty pronominal *pro* can occur here. But why is expletive *es* barred in these sentences?

We propose that the occurrence of *es* in $-\theta$ positions as in (15)-(17) is barred by the Avoid Pronoun Principle (see Chomsky 1981:65) which ensures that, whenever an empty pronoun is possible, no lexical pronoun will be inserted. Since an expletive empty pronominal is licensed in German in specI', the expletive *es* is ruled out in the same context.

Notice that the Avoid Pronoun Principle seems to be "weak" in the case of referential pronouns (possibly because its apparent non-application is related to pragmatic conditions), but it applies to expletive pronouns without exception. According to Travis (1984:229), the apparent obligatoriness of pleonastic *pro*-drop is due to the fact that non-referential pronouns, contrary to referential ones, cannot be reintroduced for emphasis or, in general, for pragmatic reasons. The difference between the two sets of pronouns is clear in a null-subject language like Italian. Whereas both sentences in (27) are possible, the variants of (28) with a lexical pronoun are ungrammatical:

- (27) a. *pro* E' venuto ieri.
 b. Egli/ Lui è venuto ieri.
 he/ him is come yesterday
- (28) a. *pro* Piove.
 b. *Egli/ *Lui/ *Esso piove.
 he/ him/ it rains
 c. *pro* E' evidente che non verrà.
 d. *Egli/ *Lui/ *Esso è evidente che non verrà.
 he/ him/ it is obvious that (he) not will-come

The explanatory force of this principle becomes even clearer in NPs, where an expletive subject is not required by any principle and is in fact always excluded (see Giorgi and Longobardi 1988):

(29) *there's discussion of many problems

This type of analysis can provide a simple and straightforward explanation of the fact that only *pro* is possible and *es* is excluded in sentences like (15)-(17). On the other hand, any analysis that allows sentence-internal *es* to be an expletive cannot account for (15)-(17) without making *ad hoc* stipulations. We will review some of these analyses in the next section.

1.3.1. Previous analyses

Fanselow (1987) gives two different explanations for the ungrammaticality of *es* in (15) and (16). Sentence (15) would be excluded because *es* is not coindexed with any element. However, it is not clear why it should be so. In (16), *es* would be coindexed with the NP in object position, and this would lead to a violation of principle C of the Binding Theory. First, notice that Chomsky (1986a) states that principle C does not apply to an argument bound by a non-argument, as would be the case in (16). And second, it does not seem desirable to have recourse to two different principles to rule out sentences such as (15) and (16), which are in essence very similar. Tomaselli (1986) excludes the presence of *es* in a sentence like (15) (without however generalizing the suggestion to the similar contexts (16) and (17)) by saying that in such a case the expletive *es* is not in a chain with an extraposed clause, as it usually is. Why *es* should be in a chain with a clause is not clear, given also the fact that such a requirement is not operative for the empty expletive *pro* (nor for the lexical expletive *es* in the first position of a verb-second clause, see 1.4.2.).

A possible analysis of the alternation *es/pro* in terms of Case Theory does not work either. If nominative Case is assigned through chain government to the VP-internal NP (see den Besten 1985), the fact that no Case is assigned to the subject position of (15)-(17) would exclude the occurrence of a lexical element such as *es*. However, in a theory which includes the partitive hypothesis (see Belletti 1988a), according to which an inherent Case can be assigned VP-internally by the verb in sentences like (16)-(17) (see 1.4.1.), the nominative Case assigned by I° will be still available and is in fact assigned to the empty pronominal *pro* in specI' (see

also Travis 1984:243 for the same conclusion that *pro*, a T-type pleonastic in her typology, occurs in a Case-marked subject position). The same holds for the impersonal passive case of (15). We claim that nominative Case is assigned to *pro* in subject position, and not to the passive morphology (cf. Roberts 1987), to which accusative (cf. Jaeggli 1986) or no Case at all (cf. Baker 1988 and Baker, Johnson and Roberts 1989) is assigned instead. (For a more extended discussion of this point, see 2.2.2.).

1.4. Sentence-initial "es"

In structures like (15)-(17), a sentence-initial *es* is possible and indeed obligatory if nothing else is preposed:

- (30) a. Es wird getanzt.
 b. Es ist ein Mann gekommen.
 c. Es wurde ein Buch/ kein Buch gestohlen.
 d. Es hat ein Mann angerufen.
 e. Es hat ihn ein Mann betrogen.

It is usually assumed that *es* is a surface adjustment particle inserted for the verb-second requirements (Breckenridge 1975, Lenerz 1985, Safir 1985, Tomaselli 1986), whenever specC' remains empty.⁽⁵⁾

Es does not cooccur in fact with any other element that appears in specC'. It does not cooccur with a *wh*-pronoun, (31), nor with a discourse-linked empty operator, (32),⁽⁶⁾ nor with the empty operator which gives the modality of the sentence (interrogative, exclamative, conditional, etc.), (33)-(35) (see Travis 1984:135ff, Safir 1985: fn.1):

- (31) a. *[Es wer] ist gestern gekommen?
 it who is yesterday come
 b. Wer ist gestern gekommen?
- (32) Hat jemand Ecos Roman gekauft?
 has anyone E.'s novel bought
- a. *[Es Op] hat ein Mann *e* gekauft.
 it has a man bought
- b. Op hat ein Mann *e* gekauft.

- (33) a. *[Es *Op*] kommt jemand morgen?
it comes anyone tomorrow
- b. *Op* Kommt jemand morgen?
- (34) a. *[Es *Op*] hätten die Leute doch nicht gelogen!
it had people not lied
- b. *Op* Hätten die Leute doch nicht gelogen!
- (35) a. *[Es *Op*] hätten viele Leute die Wahrheit gesagt, wäre es besser
gewesen.
it had many people the truth said, would-be it better been
- b. *Op* Hätten viele Leute die Wahrheit gesagt, wäre es besser
gewesen.

The sentences in (31)-(35) simply show that *es* is incompatible with any other operator, lexical or empty, occurring in *specC'*. This fact had led us to the conclusion that *es* is an operator, too, i.e. a V/2-clause operator generated in *specC'* (cf. Cardinaletti 1987). Only a syntactic explanation is possible for (31)-(35). A pragmatic one, which would regard *es* as a sort of presentational element that introduces a declarative sentence (see Lenerz 1985 among others) should formulate *ad hoc* rules to account for the different illocutionary force of the sentence types where *es* does not occur (see (31)-(35)) as well as of those where it can occur (see (36)-(39)). It is in fact not restricted to declarative sentences (36), but possible with *Vergewisserungsfragen* (37), echo-questions (38) and sentential V/2 complements of verbs like *sagen*, *glauben*, etc. (39):

- (36) a. Es kamen viele Gäste.
it came many guests
- b. Viele Gäste kamen.
- (37) a. Es kamen viele Gäste?
b. Viele Gäste kamen?
- (38) a. Es hat jemand wen angerufen?
it has someone whom phoned

b. Hat jemand wen angerufen?

(39) a. Ich glaube, es sind viele Briefe da.
I think it are many letters there

b. Ich glaube, viele Briefe sind da.

However, syntactic analyses that, as we already said, regard *es* as a surface adjustment particle inserted in specC' or as an operator generated in specC' cannot account for its lexical form. It is not clear why it should surface as *es* if it were an adjustment particle or an operator. Another kind of solution seems necessary.

1.4.1. The Definiteness effect

Breckenridge (1975:86 ff), Travis (1984:200), Lenerz (1985:122 f) and Belletti (1988a:14) have all noticed that, contrary to current claims, the *es*-construction in German does show the Definiteness effect: the subject must be indefinite: proper names, definite NPs and pronouns lead to ungrammaticality or at least to strong marginality:

(40) a. *Es kam Karl über die Hügel geritten.
it came K. over the hill riding

b. ??Es kam der König über die Hügel geritten.
it came the king over the hill riding

c. Es stieß ihn ein Soldat/ *der Soldat von der Brücke.
it pushed him a soldier/ the soldier off the bridge

d. Es hat ein Mann/ *der Mann die Maria geküßt.
it has a man/ the man the M. kissed

e. *Es hat jeder Mann ein Buch gekauft.
it has each man a book bought

(41) a. *Es hat er ein Buch gekauft.
it has he a book bought

b. *Es hatte es das Spiel begriffen.
it had it the play understood

- c. *Es hatte er folgendes behauptet.
it had he the-following asserted
- d. *Es hatte man versprochen, daß ...
it had one promised that
- e. *Es waren wir über die Hügel geritten.
it were we over the hill ridden

In Belletti's analysis, this implies that the subject [NP,IP] position is empty and that the indefinite subject remains in the government domain of the verb, receiving partitive Case from it.^(7, 8) In Sportiche's (1988b) terms (see 1.2.2.), partitive Case is assigned either via government (by ergative verbs) or via spec-head agreement (by unergatives, i.e. intransitive and transitive verbs).

Since pronouns are intrinsically definite, they cannot remain in VP-internal position and are moved to specI' in order to receive nominative Case. Hence, the well-known incompatibility of the *es*-construction with subject pronouns (see for example Pütz 1975) receives a syntactic account (see Lenerz 1985 for a pragmatic motivation of it). As expected, quasi-arguments pattern with (41):

- (42) *Es regnet es viel hier.
it rains it much here

The construction is of course compatible with object pronouns, which do not occupy the subject position:⁽⁹⁾

- (43) Es hat ihn eine unbekannte Frau angeredet.
it has him an unknown woman addressed

Breckenridge (1975) notes that a definite NP modified by a relative clause seems to be possible in the *es*-construction:

- (44) a. *Es stieß ihn der Soldat von der Brücke.
b. Es stieß ihn der Soldat von der Brücke, der ihn 10 Minuten vorher gesehen hatte.
it pushed him the soldier off the bridge who him 10 minutes before seen had

However, Guéron (1980) argues for the only apparent definiteness of such NPs.

Notice that *es*-sentences with definite subjects are judged acceptable by some speakers. A possible way to make this fact compatible with our proposal that in the *es*-construction the subject position is empty, is to suppose that a subject NP can also occur in the *Mittelfeld*-position of scrambled elements. Alternatively, it is possible to suggest that in German a subject NP can also appear in the specT' position of the more articulated sentence-structure in which the Agr and Tense features of I° head their own projections, the first dominating the second (see Pollock 1987 as revised by Belletti 1988b).⁽¹⁰⁾

The same position can be said to be occupied by contrastively stressed definite NPs and pronouns, which, as noted by Breckenridge (1975), can appear in the *es*-construction:

- (45) a. Es stieß ihn der SOLDAT von der Brücke.
 b. Es kam nicht SIE, dafür aber ihre Schwester.
 it came not she but her sister
 (cf. *Es kam sie)

Whichever analysis is proposed for these intermediate cases, the generalization can be maintained that in the *es*-construction the subject position is empty.

1.4.2. Non-argumental "es" in specC'

If the correct generalization for the occurrence of sentence-initial *es* is that the subject position must be empty (see also Safir 1985:fn.3, Grange 1987:46), it is reasonable to hypothesize that *es* in (30) is not a surface adjustment particle, but an expletive pronoun which is generated in subject position and then moved to specC' like any XP.⁽¹¹⁾ Our analysis differs from Belletti's (1988a) in that we propose that specI' is occupied by the trace of *es* and not by an expletive *pro*, linked to *es* in specC' (see also Grewendorf 1986:196 for an analysis similar to Belletti's). Our analysis has the advantage of not stipulating that the phonetically null expletive, because of its link with *es*, counts as overt for the relevant Case assignment procedure and therefore retains nominative Case (see Belletti 1988a:fn.32). Being itself a lexical element, *es* requires Case and is in fact marked with nominative. Belletti's analysis is also unsatisfactory because, as we have

seen in 1.2., *pro* can also appear in embedded clauses, hence not linked to any *es* in *specC'*.

The question we have to answer is now: Why is the lexical expletive obligatory in *specC'*, and why is a null expletive ungrammatical in *specC'*?

- (46) **pro* ist *t* gestern ein Mann gekommen.
is yesterday a man come

Notice crucially that licensing must be regarded as a condition on the S-structure position of *pro*, not on the chain containing it. The fact that *pro* is licensed in *specI'* in German does not guarantee the grammaticality of the sentence when it superficially occurs in *specC'*. Further evidence for the local government requirement on *pro* is provided by the fact that NP-movement of a null object (see 1.4.3.) results in an ungrammatical sentence, given that no referential null subject is licensed in German, (47b).⁽¹²⁾ When topicalised, a null object cannot maintain an arbitrary interpretation, given that it falls outside the government domain of the verb, but can be assigned a pragmatically determined definite interpretation, (47c) (see fn.6):

- (47) a. Das schöne Wetter regt *pro*_{arb} an, zu bleiben.
the nice weather induces to stay
- b. *Hier wird/ werden *pro* [*t* angeregt], zu bleiben.
here is/ are induced to stay
- c. *Op* regt das schöne Wetter [*t* an], zu bleiben.

Under the approach to licensing conditions outlined in 1.2.2., the ungrammaticality of (46) receives a principled account. *Pro* is not licensed by *C°*, since it lies outside the government domain of *C°*, which is formulated in terms of strict c-command.⁽¹³⁾

The overt expletive will therefore be used in this case, which turns out to be the only configuration where a lexical expletive pronoun appears in German. This analysis of *es* also accounts for the lexical form of this element, which is, like all expletives, identical to a pronoun (here, the 3rd person neuter singular). Further evidence that the sentence-initial *es* is better analysed as a lexical expletive is provided by the fact that it patterns with lexical quasi-argumental and argumental pronouns, which are also obligatory in *specC'*, given the fact that no null subject is licensed in this position. Examples are provided by Icelandic (cf. Platzack 1987), where a quasi-argumental *pro* is licensed in sentence-internal position, but barred in sentence-initial position. The lexical counterpart obligatorily occurs:

- (48) a. I gær rigndi pro/ **pa.ð*
yesterday rained it
- b. *pa.ð*/ **pro* rigndi í gær.

In Bavarian and West-Flemish, an argumental null-subject is licensed in sentence-internal position (see (22) and (23) above), but only the lexical pronoun is possible in specC':

- (49) a. wennst pro kummst. (Bayer 1983/84:249)
if-you come
- b. *Du*/ **pro* kummst *t* noch Minga.
you come to Munich
- (50) a. da-se pro komt. (Haegeman 1987a:12)
that-she comes
- b. **pro* goa-se *t* kommen. (Haegeman 1987a:16)
will-she come
- c. *Zie* goa *t* kommen (Haegeman 1987a:16)
she will come

Our analysis makes a very interesting prediction. Since a configuration like the one in (46) arises only in a verb-second language, a lexical expletive is required only in a V/2 null-subject language such as German, whereas in a non-V/2 null-subject language such as Italian, expletive *pro* will always occur in a position, the specI' position, which is licensed by I°. The occurrence of a lexical expletive is not required by any principle and is in fact excluded by the Avoid Pronoun Principle (see 1.3.):

- (51) **Egli*/ **Esso* è evidente che non verrà.

Furthermore, Icelandic (48b) contrasts with Italian (52a), where the lexical pronoun is always barred, and Bavarian (49b) and West-Flemish (50c) contrast with Italian (52b), where an argumental lexical pronoun can be optional but never obligatory (see 1.3.):

- (52) a. *pro*/ **Esso* piove.
b. *pro*/ Lui è venuto ieri.

Notice, finally, that the presence of the lexical expletive *es* in specC' in sentences like (30) provides a further argument that the subject position is present even if not lexically realized, as is the case in the German sentences (15)-(17) (see the discussion in 1.2.), and that a [-anaph, +pron] empty category occurs there in such a configuration. The analysis of sentence-initial *es* as a lexical expletive also strongly supports the partitive hypothesis (cf. Belletti 1988a).

1.4.3. "Es" in specC' in embedded contexts

A null subject also cannot occur in the specC' of an embedded clause. No difference in grammaticality is found in (53):

(53) a. **pro* hat gestern ein Mann angerufen.

b. *Hans hat gesagt, *pro* hat gestern ein Mann angerufen.
H. has said has yesterday a man phoned

The context under bridge verbs exemplified in (53b) gives important confirmation to the assumption we made in 1.2.1. that pronominal empty categories are not subject to the ECP. The specC' position of the embedded clause in (54) is in fact properly governed by the matrix verb, since a trace is possible there, but *pro* is barred: ⁽¹⁴⁾

(54) a. *Wer* hat Hans gesagt, *t* hat *t* gestern angerufen?
who has H. said has yesterday phoned

b. *Hans hat gesagt, *pro* hat *t* gestern ein Mann angerufen.

As we said, the distribution of empty pronominals is determined in a different way. Notice that (53) patterns with Bavarian (55), where an argumental *pro* is found, supporting the assumption that licensing is responsible for both argumental and expletive null subjects:

(55) a. **pro* kummst noch Minga.
you-come to Munich

b. *D'Leid song, *pro* kummst noch Minga.
people say you-come to Munich

A condition such as Safir's (1985:206) Emex (Empty Expletive) Condition, according to which an expletive null subject must be governed, is insufficient to explain the parallel behavior of (53) and (55). It is also insufficient to account for the distribution of null expletives in specC'. In (54b), *pro* is governed by the matrix verb, still the sentence is ungrammatical. Government is not sufficient to determine the contexts in which expletive *pro* occurs in German, whereas licensing seems to be a more appropriate requirement.

We said in 1.4.2. that C° cannot license the empty pronominal in specC'. However, we must also exclude the possibility that the matrix verb in (53b) (and (55b)) licenses *pro*. Let's investigate the properties of the head V° in German. This lexical category can license the referential, arbitrary null object *pro* of Rizzi (1986). Evidence for the existence of this empty category in German is the following: it can be the antecedent of the subject of an infinitival clause, (56a,b), it can be the antecedent of an anaphor, (56c-e), it can be the subject of an argument small clause, (56f), it can be modified by a small clause, (56g) (see also Grewendorf 1986:151):⁽¹⁵⁾

- (56) a. Das schöne Wetter regt *pro* an *PRO* zu bleiben.
the nice weather induces to stay
- b. Das führt *pro* dazu *PRO* auf folgendes zu schließen.
this leads to-that the following to conclude
- c. Gute Musik versöhnt *pro* mit *sich selbst*.
good music reconciles with oneself
- d. Ein guter Psychoanalytiker kann *pro* zu *sich selbst* hinführen.
a good psychoanalyst can to oneself bring
- e. Ein gutes Gespräch kann *pro* wieder *miteinander* versöhnen.
a good conversation can again with each other reconcile
- f. Die schöne Musik macht *pro* fröhlich.
the good music makes happy
- g. Der Doktor untersucht *pro* *PRO* nur nüchtern.
this doctor visits only sober

We would like to suggest that a verb, being a lexical category, can only license an empty pronominal to which it assigns a θ -role, i.e. an argumental *pro*.⁽¹⁶⁾ Only functional categories like I° and C° can license *pros* that are

not their complements (I° licenses an expletive *pro* in Italian, C° licenses a referential *pro* in a language such as Bavarian). According to this hypothesis, *pro* in (53b) (and (55b)) is not licensed by the verb because it is not θ -marked by it; the sentence is therefore ungrammatical.

Note that the V/2 contexts in German are only apparent counterexamples to our suggestion, given that the inflected verb does not count here as a lexical category, but as an item occurring in C° :

- (57) a. *Wo wurde pro gestern getanzt?*
 where was yesterday danced
- b. *Gestern rief pro [VP ein Mann an].*
 yesterday phoned a man

A more complicated case is found in Italian as shown by (58):

- (58) *Ritengo [pro inopportuno] che Mario venga.*
 (I) believe undesirable that M. comes

Rizzi (1986:542f) claims that only an expletive *pro* is possible in this context since *ritenere* does not assign a θ -role to the subject position of the small clause, so that it does not assign any content to the empty pronominal. (58), however, is a context where reanalysis takes place (see Rizzi 1982, 1986, Cinque 1988a). As shown by the test of *ne*-cliticization, the external argument of the unergative adjective *inopportuno* becomes the internal argument of the complex predicate *ritenere inopportuno*:

- (59) a. **Ne sono inopportuni molti.*
 of-them are undesirable many
- b. *Ne ritengo inopportuni molti.*
 (I) of-them believe undesirable many

It is possible that the null subject in (58) is either no longer present after the reanalysis process, or governed and licensed inside the small clause by an abstract head Agr (see Hornstein and Lightfoot 1987, Belletti 1988b). Sentences like (58) therefore do not seem to represent a counterexample to our hypothesis that a lexical category can only license a null pronominal to which it assigns a θ -role. We can conclude that the matrix verb does not license *pro* in (53b) (and (55b)). Hence, it follows that no difference in grammaticality is expected in (53) (and (55)).

If the null expletive is not licensed in specC' in (53b), the lexical element

es will appear. As we said in 1.4.2., this turns out to be the only configuration in which a lexical expletive occurs in German.

1.5. German "da" vs. Dutch "er"

We proposed in 1.3. that the Avoid Pronoun Principle excludes the occurrence of a lexical expletive whenever an empty pronominal is possible. However, there are some expletive elements which seem to escape the Avoid Pronoun Principle. One of these elements is German *da*, which contrary to *es* (see (26)), can also occur in sentence-internal position (see Lenerz 1985):

- (60) a. Da wurde viel gelacht.
 there was much laughed
- b. Trotzdem wurde da/ *es viel gelacht.
 notwithstanding was there/it much laughed
- (61) a. Da klappert die Mühle am rauschenden Bach.
 there bangs the mill at-the rushing brook
- b. weil da/ *es die Mühle am rauschenden Bach klapperte.
 because there/it the mill at-the rushing brook banged

Da is a locative adverbial, which, however, does not necessarily imply a locative meaning. Beyond the use as a locative adverbial in (62), it also has a quantitative function similar to Italian *ne* (cf. Belletti and Rizzi 1981) in (63) and a prepositional function, both alone and linked to an extraposed clause, (64):

- (62) Ich habe da lange gewohnt.
 I have there long lived
- (63) a. Ich habe da drei gegessen.
 I have there three eaten
- b. Da habe ich drei gegessen.
- (64) a. Ich hatte damit nicht gerechnet.
 I had thereon not counted

- b. Ich habe damit gerechnet, daß er mitarbeiten will.
I have thereon counted that he co-operate will

In order to establish the status of *da* in (60) and (61), a comparison with its Dutch equivalent *er* is in order. Beyond the uses corresponding to *da* in (62)-(64), *er* has an expletive function in (65) (cf. Bennis 1986):

- (65) a. dat ??(er) wordt gedanst.
that there was danced
- b. dat ??(er) een jongen werkt.
that there a young-man works

It could be suggested that *da* in (60) and (61) also takes an expletive function. However, German *da* differs from Dutch *er* in many respects. First, *da* is optional in (60b) and (61b), whereas *er* is almost obligatory in (65). Second, there is evidence that *da* is generated in an adverbial, sentence-internal position and moved to the specC' in sentences like (60a) and (61a). This is suggested by the fact that it cannot be extracted out of an inner island, which follows if it is an adverbial element which moves out of the inner island:

- (66) a. Daß ein Mann da nicht kommt, kann ich mir schon vorstellen.
that a man there not comes can I already imagine
- b. *Da kommt ein Mann nicht.
there comes a man not
- c. *Da kommt der Hans nicht.
- (67) a. Da ist der Mann aber froh.
there is the man but happy
- b. *Da ist kein Mann aber froh.
there is no man but happy

Dutch *er* can instead cooccur with a negation, which suggests that it is not moved from an adverbial position:

- (68) Er komt een gast niet.
there comes a guest not

Further evidence that *da* is moved from an adverbial position and not from the subject position is provided by the fact that it does not have the restrictions that *es* has on the type of subject that can cooccur with it. Also a definite NP and a pronoun are possible: See the contrast between (69) and (40)-(41) in 1.4.1.:

- (69) a. Da kommt Hans.
 there comes H.
- b. Da kommt er.
 there comes he

Dutch *er* is instead incompatible with definite NPs and behaves in this respect like German *es* (see (40)-(41) in 1.4.1.):

- (70) a. Er komt iemand.
 there comes someone
- b. dat er iemand komt.
- (71) a. *Er komt Jan/ hij.
 there comes J./ he
- b. *dat er Jan/ hij komt.

We can conclude this section by saying that *da* in (60b) and (61b) is not an expletive occupying the subject position, but an adverbial element occupying an adverbial position. Being an adverbial, it is not submitted to the Avoid Pronoun Principle, which applies to nominal pronouns. *Da* crucially differs from Dutch *er*, which seems instead to occupy the subject position (cf. den Besten 1982 and 1985 among others). An analysis of the distribution of expletive *er* in Dutch is out of the scope of this study. We only want to point out here that *er* also differs from German *es*. Being adverbial in nature, its occurrence seems to be not submitted to the Avoid Pronoun Principle, but ruled by other principles (see Bennis 1986:3.5.3.). Alternatively, one can suggest that *er* is the equivalent of English *there*, and there is in fact no null expletive in Dutch (see Safir 1985, Haider 1988c). This would also explain why the lexical equivalent of *pro*, *het*, never shows up in specC' in Dutch:

- (72) *Het wordt gelachen. (Bennis 1986:109)
 it was laughed

(72) differs from German (73), where the lexical counterpart of the null expletive occurs (see 1.4.2.):

(73) Es wurde gelacht.

1.6. Conclusions

The analysis we have outlined in this chapter can be summarized as follows:

- (74) a. *es* can be argumental or non-argumental
 b. *pro* (in specI') is non-argumental (as a consequence of the licensing properties of C° in German, see 1.2.2.)
 c. *es* is barred when *pro* can be used (as a consequence of the Avoid Pronoun Principle, see 1.3.)
 d. sentence-initial *es* (in specC') is non-argumental.

Nothing else must be added in order to account for the distribution of pronoun *es* in German.

Notes to Chapter one

Part of the material of Chapter 1 and Chapter 3 will appear in *Linguistische Berichte* under the title "*Es, pro* and sentential arguments in German".

1. But cf. (56) for cases of argumental, arbitrary *pro* in object position; we will see in 1.2.2. and 1.4.3. that the differences between subject and object *pro* can be explained in terms of the way in which *pro* is licensed in German.

2. A problem is represented in German by the *es* which occurs in the existential form exemplified by (i):

- (i) Es gibt viele Bücher hier.
 it gives many books here

This *es* can only marginally control (cf. (ii)). However, it can occur as the infinitival complement of a raising verb (cf. (iii)):

- (ii) a.?? Es gibt viele Studenten ohne PRO viele Professoren zu geben.
 it gives many students without many professors to give
 b.? Ohne PRO viele Professoren zu geben, gibt es viele Studenten.

- (iii) a. daß es viele Leute zu geben scheint.
that it many people to give seems
- b. Hier scheint es viele Leute zu geben.
here seems it many people to give

This shows (*contra* Tomaselli 1986) that the marginality of (ii) is not due to a ban on the appearance of this construction in infinitivals.

3. We disagree here with Haider (1988a), who does not assume a structural, [NP, IP] subject position in German due to its nature as a non-configurational language. For arguments in favour of the configurationality of German, see Webelhuth (1984/85).

4. The same suggestion is independently made by Rizzi and Roberts (1988:35) for Italian and French, and by Roberts (1989) for Old French.

5. See Scherpenisse (1986) and Travis (1984) for a different analysis of sentence-initial *es* as occupying, respectively, a position adjoined to IP and the specI' position. For arguments against Travis' analysis, cf. Schwartz and Vikner (1989).

6. See Bayer (1983/84:fn.4) and Huang (1984) for German, Raposo (1986) for Portuguese. The discourse-linked empty operator in specC' binds an empty category in sentence-internal A-position.

7. Independent evidence for this is provided by the possibility of topicalising an indefinite subject with the verb (cf. Haider 1988b):

- (i) a. [Ein Haus gekauft] wurde hier noch nie.
a house bought was here yet not
- b. [Dem Karl ein Buch gegeben] wurde noch nicht.
to-the K. a book given was yet not
- c. [Geld einem Penner gegeben] wurde vom Büro nicht.
money to-a beggar given was by-the office not
- d. [Ein Fehler unterlaufen] ist ihm noch nicht.
an error escaped is to-him yet not
- e. [Kinder gespielt] haben hier noch nicht.
children played have here yet not
- f. ?[Ein Außenseiter einen Preis gewonnen] hat da noch nie.
an outsider a prize won has there yet not

Was-für split and modifier stranding, which concern indefinite NPs, are also possible with subjects, which shows that they can remain in VP-internal position:

- (ii) a. Was sind denn für Leute angekommen?
what are then for people arrived
- b. Was haben denn für Leute angerufen?

what have then for people phoned

c. ?Was haben denn für Studenten dieses Buch gelesen?
what have then for students this book read

(iii) a. Leute sind bisher nur englische angekommen.
people are till-now only English arrived

b. Leute haben bisher nur englische angerufen.
people have till-now only English phoned

c. ?Studenten haben bisher nur fortgeschrittene dieses Buch
gelesen.
students have till-now only advanced this book read

8. Partitive Case does not have its own morphology in German, but is morphologically realized as nominative. This does not weaken the analysis if the syntactically relevant notion is that of abstract Case. The abstract Case "partitive" is associated with the morphological Case "nominative" in German.

9. Notice, however, that an object *es* is impossible in the *es*- construction:

(i) *Es hat es ein Italiener gekauft.
it has it an Italian bought

(ii) *Es hat ihm's ein Mann gesagt, daß er kommen sollte.
it has to-him it a man said that he come should

(iii) *Es wurde ihm's schon früher gesagt, daß er kommen sollte.
it was to-him it already before said that he come should

Lenerz (1985) suggests a filter against the cooccurrence of two *es* one of which is not argumental. This improves over Pütz' (1975:137) filter, according to which no occurrence of two *es* is allowed, which incorrectly excludes a possible sentence such as (iv), where the first *es* is the subject and the second the object:

(iv) Es (= das Kind) hat es begriffen.
it (the child) has it understood

The ungrammaticality of (i)-(iii) reminds of the impossibility of sequences of two identical clitics in Italian:

(v) a. *Si la si è comprata ieri. (cf. Ce la si è comprata ieri)
for-oneself it SI is bought yesterday

b. *Voi vi vi siete trovati bene. (cf. Voi vi ci siete trovati bene)
you yourself there are found well

Cf. Cinque (1987) for the discussion of (v). See also Bennis (1986) for the analysis of some ungrammatical sequences of two *er* in Dutch.

10. That a definite subject, contrary to an indefinite one (see fn.7) cannot remain in VP-inter-

nal position is shown by the fact that it cannot be topicalised with the verb:

- (i) a. * [Das Haus gekauft] wurde hier noch nie.
- b. * [Dem Karl das Buch gegeben] wurde noch nicht.
- c. * [Das Geld einem Penner gegeben] wurde vom Büro nicht.
- d. * [Der Fehler unterlaufen] ist ihm noch nicht.
- e. * [Die Kinder gespielt] haben hier noch nicht.
- f. * [Der Außenseiter einen Preis gewonnen] hat da noch nie.

This follows if definite subjects must move out of VP in order to receive nominative Case. The Definiteness effect shown in (i) is not found with objects, which are assigned accusative by the verb:

- (ii) [Das Haus gekauft] habe ich noch nicht.
 the house bought have I yet not

When a definite subject appears to be topicalised with the verb, no agreement with the verb shows up, which means that it does not count as a subject. The VP is topicalised as a whole, probably under an eventive reading, and the verb gets the unmarked features of 3rd person singular:

- (iii) [Unserem Museum diese Bücher geschenkt] wurde/*wurden schon letztes Jahr.
 to-our museum these books given was/ were already last year

11. Thanks to Luigi Rizzi (p.c.) for suggesting this possibility.

12. Similar facts are found in Italian. A null object raised to specI' will acquire a definite interpretation (depending on the licensing head I°), in spite of the fact that it originates in a position where the arbitrary interpretation would be allowed by the verb (cf. Rizzi 1986:523f):

- (i) a. Gianni fotografa pro_{arb} nudi.
 G. photographs nude
- b. pro_{arb} vengono fotografati t nudi.
 (they) are photographed nude

Notice that (ii) is also ungrammatical (cf. Rizzi 1986:524, and 2.5.1.):

- (ii) * pro_{expl} vengono fotografati pro_{arb} nudi.

13. Rizzi (1987a) observes that *pro* is excluded from occurring in specC', an A'-position, for empty categories specified by the features [\pm pron; \pm anaph] are only possible in A-positions.

14. A discourse-linked empty operator (see fn.6) also seems to be possible for some speakers in the specC' of a clause embedded under a verb such as *wissen*:

- (i) Du weißt doch, *Op* habe ich gestern *e* gekauft.
 you know well have I yesterday bought

15. Examples like (56d) and (56g) are judged marginal by some speakers. This must probably be attributed to the fact that the relevant reading is not the preferred one. In the preferred reading, the anaphor and the predicative, respectively, are interpreted as being linked to

the subject and not to the empty object. This is probably due to the fact that in German there is no morphological signal that distinguishes the two readings, as is the case in Italian:

- (i) Un buon medico visita pro; nudi.
a good doctor visits nude-pl
- (ii) Un buon medico; visita pro nudo;
a good doctor visits nude-sg

Notice that when the subject is plural, the preferred reading in Italian is (iii_a), where the predicative is linked to the subject, rather than (iii_b), where it refers to the null object. This observation supports our interpretation of the apparent marginality of the German facts cited above:

- (iii) a. I bravi medici; visitano pro nudi.
- b. I bravi medici visitano pro; nudi.

16. This suggestion is supported by the fact that also the lexical head P° can only license a *pro* to which it assigns a θ -role. See the following contrast in French (Zribi-Hertz 1984):

- (i) On est parti avec pro.
we are left with
- (ii) *Je me suis retrouvé avec [pro à réparer].
I myself am found with to repair

CHAPTER TWO

IMPERSONAL MIDDLES

2.1. Introduction

An obligatory instance of *es* is found in sentences like (1):

- (1) Hier lebt es sich angenehm.
here lives it SICH nicely

(1) resembles the impersonal *si*-construction found in Italian:

- (2) Qui si dorme bene.
here SI sleeps well

However, we will discuss evidence that (1) is not an "impersonal" construction like (2), but rather an instance of the so-called "middle" construction found with transitive verbs:

- (3) Diese Bücher lesen sich einfach.
these books read SICH easily

If the middle construction with transitive verbs in (3) is *mutatis mutandis* an instance of subject dethematization and promotion of the direct object into a derived subject essentially like the passive construction in (4), we can relate (1) to the corresponding passive intransitive verb in (5), i.e. the so-called impersonal passive:

- (4) Diese Bücher werden oft gelesen.
these books are often read
- (5) Hier wird angenehm gelebt.
here is nicely lived

The striking difference between the two constructions as far as the present study is concerned regards the distribution of *es*: *es* is obligatory in (1) and impossible in (5) (see 1.3.):

- (6) a. Hier lebt *(es) sich angenehm.
b. Hier wird (*es) angenehm gelebt.

If *sich* behaved like the passive morphology in absorbing the external θ -role (cf. Roberts 1987), the subject position would be a $-\theta$ position and would be occupied by a non-argumental *pro*, as happens in the impersonal passive case (see 1.2.):

- (7) a. Hier lebt pro sich angenehm.
 b. Hier wird pro angenehm gelebt.

That (7a) is not a possible representation for (1) is indicated by the ungrammaticality of (6a) without *es*.

Before suggesting in 2.5. a possible way of accounting for (6a) in accordance with our theory that *es* is an argument when it appears in a sentence-internal position (see Chapter 1), we will review in 2.2. some previous analyses of the contrast in (6).

2.2. Previous analyses

2.2.1. The Binding-Theory approach

Haider (1985) suggests that *es* in (1) is an expletive subject. It is inserted in order to provide a (formal) antecedent for the element *sich*. Being an anaphor, *sich* cannot act as a syntactic subject, although it is assigned the external θ -role.⁽¹⁾

This analysis is possible only in Haider's framework in which no expletive *pro* is assumed. If one instead assumes the existence of expletive *pro*, as we do, Haider's analysis becomes inadequate for both theoretical and empirical reasons. First notice that no language distinguishes between lexical and empty binders. If *sich* needs an antecedent, an empty binder should be possible. This is for instance what happens in the grammatical Italian sentence of (2), where impersonal *si* occurs. If *si*, which, like *sich*, coincides with the 3rd person reflexive, requires an antecedent, this function is taken over by the empty expletive:

- (8) Qui pro si dorme bene.

Second, and most important, the same seems to happen in German with the transitive middle construction of (3). The derived subject can remain in VP-internal position, as shown by the possibility of being topicalised with the verb and of allowing *was-für*-split (cf. Ch. 1, fn.7):

- (9) a. [Bücher gelesen] haben sich hier immer angenehm.
 books read have SICH here always nicely
- b. Was lesen sich denn für Bücher einfach?
 what read SICH then for books easily

As illustrated by the structure in (10), *sich* does not have an antecedent in Haider's (1985) sense, because it is not *c*-commanded by the derived subject. Rather, *sich* is bound by an empty expletive:

- (10) daß pro sich [_{VP} Bücher einfach lesen]

Notice also that *es* is impossible in (10), suggesting that the obligatory presence of *es* in (1), here repeated as (12), cannot be accounted for in terms of Binding Theory and needs another explanation:

- (11) *daß es sich Bücher einfach lesen.
 (12) daß es sich hier angenehm lebt.

2.2.2. The Case-Theory approach

Also assuming that in an impersonal middle construction *sich* is the argument assigned the external θ -role, Boschetti (1986) tries to account for the contrast in (6) in terms of Case theory. Following Roberts (1987), he assumes that in an impersonal passive the nominative Case is assigned to the passive morphology, the *specI'* position remaining a non-Case position. In the impersonal middle construction, on the other hand, *sich* cannot be assigned nominative Case, hence the insertion of the lexical expletive *es* to realize Case.

Again, the question arises as to why Italian *si*, which is also the same as the reflexive morpheme, should be instead compatible with nominative Case (see Belletti 1982, Burzio 1986, Cinque 1988c).

Notice also that, as discussed in Chapter 1, *pro* always occurs in Case positions. As we said there (1.3.1.), we assume, differently from Roberts (1987), that nominative Case is not assigned to the passive morphology in an impersonal passive, but that *specI'* is the position where nominative Case is assigned. Our analysis of sentence-initial *es* as a lexical expletive moved from *specI'* also forces the assumption that nominative Case is assigned to *specI'*. Further evidence supporting this analysis is provided by the following contrast:

- (13) a. Hier scheint oft getanzt zu werden.
 here seems (it) often danced to be
- b. *Es ist schön, hier getanzt zu werden.
 it is nice here danced to be

Roberts (1987) excludes (13b) on the basis of the failure of Case-assignment to the passive morphology. (13a) is instead grammatical because the passive morphology can receive nominative Case from the matrix inflection via chain-government (cf. den Besten 1985).

Notice however that (13b) can also be ruled out on the basis of the often observed lack of expletive PRO. If *pro* is generated instead in subject position, the sentence is ruled out on very general grounds which also account for the ungrammaticality of (14), where no passive morphology is involved:

- (14) *Hier scheint drei Kinder gekommen zu sein.
 here seems (it) three children come to be

As proposed by Belletti (1988a) for the Italian sentence (15) corresponding to (14),

- (15) *Sembra essere arrivati tre ragazzi.
 (it) seems be arrived three children

(14) is ungrammatical because *pro* in the subject position of the infinitival clause is not assigned Case:

- (16) Hier scheint pro [pro [drei Kinder gekommen] zu sein].

Pro does not receive Case in the infinitival clause, nor is it possible that Case is transmitted, via chain, from the matrix to the embedded clause (see also Chomsky 1988). Under this hypothesis, (13a) should be ungrammatical as well, given that *pro* in the subject position of the infinitival clause would not be assigned nominative Case. The ungrammatical representation of (13a) is that in (17):

- (17) *Hier scheint pro [pro oft getanzt zu werden].

The grammatical sentence (13a) must be represented as in (18), which is similar to the representation (19b) assigned by Belletti to the grammatical sentence (19a), corresponding to (15):

- (18) Hier scheint *pro* [*t* oft getanzt zu werden].
- (19) a. Sembrano essere arrivati tre ragazzi.
b. *pro* sembrano [*t* essere arrivati tre ragazzi].

In (18) and (19b), *pro* is raised to the subject position of the matrix clause where it is marked with nominative Case.

If the analysis in (18) is correct, the passive morphology seems not to receive any Case at all (see Baker, Johnson and Roberts 1989). This means that in the simple case (5) not the passive morphology but *pro* in specI' will be marked nominative.⁽²⁾ If specI' is the Case-position in (1), too, it follows that the contrast in (6) cannot be expressed in terms of Case theory.

2.2.3. The derived-subject approach

The last attempt to explain the presence of *es* in (1) that we want to review here is that of Haider and Rindler-Schjerve (1987), who claim that *es* in (1) is a derived subject. Their analysis is based on the observation that the intransitive verbs that allow middle formation are pseudotransitive, i.e. they can occur with what is called an inner object (for example: *Er lebte ein bequemes Leben*, "he lived a comfortable life"). *Es* would be generated in the object position where the inner object is usually generated and would be raised to the specI' position in order to receive nominative Case. This analysis makes the middle construction with intransitive verbs fully parallel to that with transitive verbs. That this cannot be the case, as far as the external θ -role is concerned, will be discussed in 2.3. Furthermore, this analysis is also empirically inadequate. As pointed out by Pitz (1988), there are some intransitive verbs that allow middle formation without having however an inner object. Some examples are provided by *sitzen* "sit", *arbeiten* "work", *helfen* "help":

- (20) a. Hier sitzt es sich gut.
here sits it SICH well
- b. Hier arbeitet es sich gut.
here works it SICH well
- c. Dir hilft es sich schwer.
to-you helps it SICH not easily

We can conclude this section by saying that none of the proposals found in the literature are satisfactory to account for the occurrence of *es* in the impersonal middle construction of (1). Another kind of analysis seems necessary.⁽³⁾

Notice that under the framework we have outlined in Chapter 1, according to which any occurrence of *es* in an A-position is an argument, we would predict that *es* in the impersonal middle is an argument, too. Differently from Haider (1985) and Boschetti (1986), we will claim that *es* and not *sich* bears the external θ -role assigned by the verb. Before trying to substantiate this analysis, we will first discuss empirical evidence that in an impersonal middle the external θ -role is in fact present.

2.3. Syntactic activity of the external argument

Boschetti (1986) has very convincingly demonstrated that the middle construction formed from transitive verbs is crucially different from the one based on intransitive verbs. The difference relies in the fact that the external argument is "suppressed" in the former as is the case in the corresponding middle constructions of English (Roberts 1987) and Italian (Cinque 1988c), whereas it is still syntactically present in the latter. Let us review the usual tests for syntactic activity of an "implicit" argument.

Binding of an anaphor is not possible in the personal middle construction, (21), but possible in the impersonal one, (22):

- (21) a. * Diese Bücher lesen sich einfach miteinander.
these books read SICH easily with each other
- b. ??Dieses Buch liest sich einfach miteinander.
this book reads SICH easily with each other
- (22) a. Hier tanzt es sich gut miteinander.
here dances it SICH nicely with each other
- b. Hier redet es sich gut miteinander.
here speaks it SICH nicely with each other
- c. Hier hilft es sich einander sehr einfach.
here helps it SICH each other very easily
- d. ?Hier spricht es sich einfach nur über sich selbst.
here speaks it SICH easily only on oneself

Only the impersonal middle admits control into purpose clauses (see Boschetti 1986):

- (23) a. *Das Buch liest sich leicht, um sich für die Prüfung vorzubereiten.
the book reads SICH easily in order oneself for the exam to
prepare
- b. ?Hier tanzt es sich leicht, um sich für die Prüfung vorzubereiten.
here dances it SICH easily in order oneself for the exam to
prepare

Control into some adjuncts is only possible in the impersonal middle construction (see Boschetti 1986):

- (24) a. *Joghurt ißt sich angenehm, ohne dicker zu werden.
yoghurt eats SICH nicely without fatter to become
- b. Hier tanzt es sich angenehm, ohne viel zu schwitzen.
here dances it SICH nicely without much to sweat

Predicatives are only possible in the impersonal middle (see Boschetti 1986):

- (25) a. *Das Auto fährt sich besser nüchtern.
the auto drives SICH better sober
- b. Hier tanzt es sich sehr angenehm nackt.
here dances it SICH very nicely nude

The grammaticality of the sentences with impersonal middles suggests that the external argument is not suppressed as instead happens in the middles formed from transitive verbs, but is syntactically present. The natural question arises: in impersonal middles, are we dealing with a "middle" construction or with an impersonal construction like the impersonal *si*-constructions found for example in Italian? Notice that both [+arg] *si* and [-arg] *si* because of its link with a [+arg] *pro* show syntactic activity of the external argument in Italian (see Cinque 1988c and Roberts 1987).

Although apparently related to the impersonal constructions found in Italian, impersonal middles pattern with their transitive counterpart as far all the properties typical of middles are concerned. We will discuss some of

them in the next section.

2.4. Properties of middles

As far as the aspectual properties are concerned, middles are statives (see Keyser and Roeper 1984, Roberts 1987 for English). Typically, they are incompatible with agentive adverbs:

- (26) a. *Diese Bücher lesen sich freiwillig/ absichtlich angenehm.
 these books read **SICH** voluntarily/ deliberately nicely
- b. *Hier tanzt es sich freiwillig/ absichtlich angenehm.
 here dances it **SICH** voluntarily/ deliberately nicely

Both middles refuse an eventive, agentive interpretation and allow only a "property" reading. (27a) and (28a) can be paraphrased with (27b) and (28b), respectively, where the understood external argument is construed with the experiencer argument of the adverb that usually occurs in middles:

- (27) a. Dieses Buch liest sich einfach.
 b. Es ist einfach für x, daß x dieses Buch liest.
 it is easy for x that x this book reads
- (28) a. Hier lebt es sich angenehm.
 b. Es ist angenehm für x, daß x hier lebt.
 it is nice for x that x here lives

As often observed (see Keyser and Roeper 1984:385 for English), some kind of modification is in fact obligatory in middles. This is usually in the form of an adverb, although modals, negation and focus can also perform this function. The need for an adverb is also found in impersonal middles:

- (29) a. Diese Bücher lesen sich abends *(angenehm).
 b. Hier tanzt es sich immer *(angenehm).

The semantically present external argument is interpreted as arbitrary in reference. Because of the arbitrary interpretation of the external argument, sentence (30) can only refer to humans.⁽⁴⁾

(30) Hier tanzt es sich gut.

In the typology discussed by Cinque (1988c), the arbitrary subject can only receive a quasi-universal interpretation. The middle construction is in fact incompatible with specific time reference (see Boschetti 1986):

- (31) a. *Das Buch las sich gestern leicht.
the book read SICH yesterday easily
- b. *Gestern tanzte es sich gut.
yesterday danced it SICH nicely

The middle construction is compatible with generic time reference:

- (32) a. Das Buch liest sich immer leicht.
b. Hier tanzt es sich immer gut.

For reasons that we do not understand, it is incompatible with contexts suspending the specificity of the time reference. The crucial point is, however, that both middle constructions behave alike:

- (33) a. *Wenn sich das Buch so leicht gelesen hat, gibt's einen Grund dafür.
if SICH the book so easily read has gives it a motivation for-this
- b. *Wenn es sich gestern sehr gut getanzt hat, muß es sicher einen Grund geben.
if it SICH yesterday very well danced has must it surely a motivation give

The middle construction is incompatible with the existence of a single individual satisfying the description:

- (34) a. *Das Buch liest sich leicht. Hans schafft es.
the book reads SICH easily. H. manages it
- b. *Hier tanzt es sich leicht. Hans schafft es.
here dances it SICH easily. H. manages it

The impersonal middle construction seems to pattern with the middle construction formed from transitive verbs, suggesting that we are dealing in fact with a "middle" process, which has the function of passivizing the

intransitive verb. The middle process is essentially similar to what happens in impersonal passives. Like passive formation, middle formation is restricted to verbs with an external θ -role (see Boschetti 1986):

- | | |
|----------------|--|
| (35) a. Vtrans | Diese Bücher lesen sich leicht. |
| b. Vintr | Hier tanzt es sich gut. |
| c. Verg | *Hier kommt es sich schnell an. here arrives it SICH quickly |
| d. Vcop | *Hier ist es sich nur schwer zufrieden. here is it SICH only with difficulty happy |
| e. Vpass | *Hier wird es sich schlecht versorgt. here is it SICH badly supplied |
| f. Vrais | *dâß es sich nie scheint, ordnungsgemäß zu handeln. that it SICH never seems properly to behave |

The same restriction to external θ -roles is found with the [+arg] *si* of Italian (see Cinque 1988c). It seems that there is a possible way to correlate the impersonal and the middle use of *si*. We would like to suggest that the middle morpheme *si* is the [-arg] counterpart of the impersonal [+arg] *si* found in Italian. Whereas [+arg] *si* receives the external θ -role assigned by the verb, [-arg] *si* is compatible with the dethematization of the subject position and the consequent failure of structural accusative Case assignment to the object position. Notice incidentally that this [-arg] *si* is crucially different from what Cinque (1988c) calls [-arg] *si*. The latter kind of *si* simply provides I° with the appropriate features to license an arbitrary *pro*.

Let us now turn to German. German does not have a [+arg] *sich*, still has its [-arg] counterpart: i.e., the middle *sich*, which is compatible with the dethematization of the subject position and the failure of Case assignment to the object position.⁽⁵⁾ Since impersonal passives are possible in German (probably for Case-theoretical reasons, as we suggest in 2.7.), impersonal middles are found, too.

We will not attempt here a formal analysis of the middle process in order to account for all the properties of middles discussed above. For recent analyses for English, Dutch and French, we refer to Roberts (1987), Hoekstra and Roberts (1988) and Fellbaum and Zribi-Hertz (1988). What

we would only like to point out here in this respect is that whatever analysis one suggests, it cannot be restricted to middles formed from transitive verbs, but must account for both personal and impersonal middles.

Here, we will concentrate on the aspect of middle formation which concerns the dethematization of the subject position. We would like to argue that a possible way of analysing the dethematization of the subject position in middles can provide a straightforward account for the occurrence of the pronoun *es* in the *non*-dethematized subject position of impersonal middles.

2.5. The dethematization of the subject position

Hoekstra and Roberts (1988) suggest that middles are not lexically derived. They claim that not only the promotion of the internal argument to derived subject takes place in the syntax (cf. also Keyser and Roeper 1984, Fellbaum and Zribi-Hertz 1988), but that also the dethematization of the subject position is a syntactic process. Evidence for this is the fact that the external argument is semantically present and must therefore be also structurally represented at all syntactic levels. Furthermore, it binds the experiencer argument of the adverb which usually occurs with middles. A sentence like (36a) can be paraphrased with (36b) (see also (27) and (28) above):

- (36) a. This floor washes nicely.
 b. It is nice for x that x washes the floor.

In order to structurally represent the "understood" logical subject, Hoekstra and Roberts (1988) suggest that a transitive verb is projected with both arguments into D-structure, the external argument being realized as the null pronominal *pro*. This instance of null subject is formally licensed at D-structure through being θ -marked by the verb. The dethematization of the subject position in middles consists in this D-structure licensing of the external argument. The D-structure licensing has the consequence of blocking the external θ -role, which turns out to be syntactically inactive (see 2.3.). The D-structure of a middle construction is something like (37) (following Sportiche 1988a among others, Hoekstra and Roberts admit the generation of the external argument in a position under VP):

- (37) [_{IP} [_{VP} *pro* [_{V'} bribe bureaucrats easily]]]

The same can be assumed for middles in Italian and German. We propose that the *si/ sich* morpheme is generated in some position outside VP, from which it governs and binds the null pronominal:

- (38) a. [IP *si* [VP *pro* leggono questi libri]]
 b. [IP *sich* [VP *pro* diese Bücher einfach lesen]]

German provides empirical evidence that *sich* is generated VP-externally. Middle *sich*, contrary to the reflexive pronouns in (39), cannot be topicalised with the verb under VP-preposing:

- (39) a. [Sich gewaschen] hat er nicht.
 himself washed has he not
 b. [Sich geschämt] hat er nicht.
 himself ashamed has he not
- (40) a. *[Sich gelesen] haben Bücher immer leicht.
 SICH read have books always easily
 b. *[(Sich) Bücher (sich) gelesen] haben immer leicht.
- (41) a. *[Sich gelebt] hat es hier immer angenehm.
 SICH lived has it here always nicely
 b. *[Es sich gelebt] hat hier immer angenehm.

The ungrammaticality of (40) and (41) suggests that middle *sich* is VP-external. Second, middle *sich*, contrary to the reflexive *sich* in (42), allows the cliticization of the pronoun *es*:

- (42) a. *Gestern hat sich's fotografiert. ('s = das Kind)
 yesterday has himself it photographed (it = the child)
 b. *Ich weiß, daß sich's fotografiert hat.
 I know that himself it photographed has
- (43) a. So lebt sich's besser.
 so lives SICH it better

- b. Jeder weiß, daß sich's hier besser lebt als in Rom.
 everyone knows that SICH it here better lives than in R.

Es-cliticization is sensitive to the D-structure order of the two elements involved. As we will see in 3.2., cliticization to a dative pronoun is only possible for a D-structure object *es* and impossible for a D-structure subject *es*. The possibility of (43) suggests that the base order must be: *sich es*. If *es* is generated in specV' (see below), *sich* must be VP-external.⁽⁶⁾

The question is now: What happens in the case of an intransitive verb in German? Let us assume that it is projected as such in the syntax, like the transitive verbs above. The external argument takes the form of a null pronominal. The D-structure of a sentence like (1), here repeated as (44), is something like (45):

(44) Hier lebt es sich angenehm.

(45) [IP sich [VP pro angenehm lebt]]

We know however that the external argument position cannot be dethematized in this case. The syntactic activity of the external argument can be taken as evidence that this process does not take place in the case of an impersonal middle. In Hoekstra and Roberts' terms, this amounts to saying that no D-structure licensing applies. Let us first investigate what would happen if the external θ -role were blocked at D-structure. An S-structure like that in (46) would be obtained:

(46) [IP pro_{expl} sich [VP pro angenehm lebt]]

Chomsky (1986a) suggests that as a consequence of the Principle of Full Interpretation, expletives cannot be present at LF because they do not receive any interpretation. A general process of expletive replacement takes place at LF, which adjoins the associate of the expletive to the expletive itself (see Chomsky 1988). In (46), however, there is no θ -bearing element that can replace the expletive in subject position, the null pronominal bearing the "frozen" θ -role not being able to undertake replacement. This is the reason why (46) is, as expected, an ungrammatical representation of (44). Notice crucially that (46) differs from impersonal passives like the one in (47), where there is an element, the passive morphology itself (or, alternatively, the null pronominal which represents the implicit argument,⁽⁷⁾) that can be LF-raised and replace the expletive *pro* in subject position:

(47) Hier wird *pro* getanz.

If this analysis can be maintained, it follows that we have to assume that the external θ -role may be not "blocked" at D-structure in impersonal middles. This means that the null subject in (45) is not D-structure licensed, but it enters S-structure as such.

2.5.1. "Es" as the lexical equivalent of arbitrary "pro"

Notice now that *pro* cannot be licensed in specV' since it is not assigned Case. In this position, nominative Case is not assigned neither can *pro* be licensed through the available partitive Case. It can be shown independently that an NP receiving a quasi-universal interpretation cannot realize (at S-structure, cf. Chomsky 1986a:193) partitive Case. The evidence comes from Italian and from Dutch and West Flemish (cf. also Belletti 1988a: 5f). As pointed out by Rizzi (1986:fn.23), Italian null objects, which receive a quasi-universal arbitrary interpretation, are incompatible with "the inherent semantic content associated with partitive Case". The following representation is therefore ungrammatical (from Rizzi 1986:524):

(48) * pro_{expl} Infl vengono fotografati pro_{arb} , PRT nudi.
are photographed (they) nude

Dutch and West Flemish provide another piece of evidence. Bennis (1986:224) and Haegeman (1987b) argue that only the a. sentences of (49) and (50), respectively, allow an indefinite interpretation of the subject NP, whereas in the b. sentences, a generic reading is forced:

(49) a. dat er een jongen werkt.
that there a boy works

b. dat een jongen werkt.

(50) a. dat-er nen student doa geweest oat.
that-there a student there been had

b. da nen student da nie zou keunen doen.
that a student that not would can do

We can interpret these facts as follows:⁽⁸⁾ In (49a) and (50a), the NP occupies

the specV' position and the expletive *is* in specI'. Partitive Case-assignment to specV' is possible in Dutch and West Flemish (cf. Haegeman 1987b), hence the logical subject is assigned partitive. As expected, it is interpreted as quasi-existential, and consequently, it is possible with a past tense:

- (51) a. dat er een jongen werkte.
 b. dat-er nen student doa geweest oat. (= (50a))

In the b. sentences of (49) and (50), the NP *is* instead in specI' and receives a quasi-universal (= generic) interpretation as a function of the generic time reference of the clause. The sentence is in fact unacceptable with specific-time reference, as is the case in (52) where the verb is in the past tense:

- (52) a. ??dat een jongen werkte.
 that a boy worked
 b. * da nen student gisteren da gedoan oat.
 that a student yesterday that done had

If quasi-universal arbitrary *pro* cannot realize partitive, *pro* cannot remain in specV' in impersonal middles. In order to receive Case, it must be raised to specI', where it can be assigned nominative. In this position, however, an argumental *pro* is not licensed, given the licensing properties of German C° (see 1.2.2.). It follows that a grammatical representation is obtained only if a lexical pronoun is inserted. We would like to suggest that *es* is the lexical element generated in the external argument position of an impersonal middle. We can substantiate this suggestion with empirical evidence. Boschetti (1986) notices that an appositive *als*-phrase referring to the agent is only possible in an impersonal middle, but impossible in a middle construction derived from transitive verbs:⁽⁹⁾

- (53) a. Hier lebt es sich als Ausländer recht angenehm.
 here lives it SICH as foreigner rather nicely
 b. *Der Wein trinkt sich als Gast angenehm.
 the wine drinks SICH as guest nicely

This contrast is taken as further evidence that the external θ -role is syntactically active only in the former structure of (53). However, an *als*-phrase is not possible in passives, where the implicit argument is

syntactically active:

- (54) a. *Hier wird als Ausländer angenehm gelebt.
 here is as foreigner nicely lived
- b. *Das Buch wird als Ausländer schwer gelesen.
 the book is as foreigner hard read

Let us assume that an *als*-phrase is a small clause like that represented in (55):

- (55) [PRO als NP]

The possibility of an *als*-phrase seems to be dependent on the presence in the sentence of an NP that c-commands it and binds the empty subject. The grammaticality of (53a) suggests that there is in fact an NP in this sentence: the pronoun *es*.

Obviously, not any lexical NP can be inserted in an impersonal middle. The following sentences are ungrammatical:

- (56) a. *Hier tanzt Hans/ er sich gut.
 here dances H./ he SICH well
- b. *Hier tanzen die Leute sich gut.
 here dance the people SICH well
- c. *Hier tanzt die Klasse sich gut.
 here dances the class SICH well

The crucial thing is that a referential NP cannot occur in the impersonal middle construction. Notice that the same happens in the impersonal *si* constructions of Italian (with [-arg] *si*):⁽¹⁰⁾

- (57) a. *La gente si dorme bene qui.
 the people SI sleeps well here
- b. *La gente si va al cinema la domenica.
 the people SI goes to the cinema on Sunday

We would like to claim that this pattern depends on the incompatibility between *arb*-interpretation and an NP carrying a referential index. Only pronominals can occur in arbitrary contexts, since they can also bear no

referential index, being for example possible as quasi-arguments and non-arguments.

The difference between German and Italian in the realization of the arbitrary pronoun depends on the null-subject properties of the two languages. Since Italian is a null-subject language, the arbitrary function is taken by the null pronominal *pro*. In German, only the lexical pronoun *es* is possible.

If this analysis is correct, *es* turns out to be the lexical equivalent of Italian arbitrary *pro*. In the next section, we will discuss independent evidence for arbitrary *es* in German.

2.5.2. Further instances of arbitrary "es"

In the impersonal middle construction, we find an instance of arbitrary *es* with quasi-universal interpretation. We expect that *es* is also possible with a quasi-existential interpretation. This expectation is borne out. A quasi-existential *es* is found in the following sentences, where it can refer to some unspecified agent.⁽¹¹⁾ Notice that *es* here can only be paraphrased with *jemand*, "someone", not with the impersonal pronoun *man*, "one" (see (67) below):

(58) a. daß es klopft.
that it knocks

b. daß es klingelt.
that it rings

The external argument position is a θ -position, as shown by the fact that any NP can occur there:

(59) a. Hans klopft.
b. Hans klingelt.

Notice however that no syntactic activity is shown by the external argument of (58):

(60) a. *Es klopfte an der Tür voneinander.
it knocked at the door of each other

b. *Es klopfte, um hereingelassen zu werden. (Pitz 1988:3.31)
it knocked in order to admitted to be

- c. *Es klopfte um einzutreten.
it knocked in order to come in
- d. *Es klopfte böse auf die ganze Welt.
it knocked angry at the whole world
- e. *Es klopfte als Direktor bei mir.
it knocked as director at my door

But this cannot be taken as evidence that we are dealing with a lexical entry of *klopfen* that does not assign any θ -role to the subject, which is therefore occupied by an expletive *es*, as proposed by Pitz (1988). First notice that, if no θ -role were assigned, we would expect no lexical pronoun *es* to occur in sentence-internal position (see Chapter 1). Second, the same properties are found with quasi-existential pronouns in Italian, where no expletive analysis is possible given the plural agreement on the verb:

- (61) a. *Hanno bussato alla porta gli uni degli altri.
(they) have knocked at the door of each other
- b. *Bussano per entrare.
(they) knock to come in
- c. *Bussano come matti/ fuori di sé.
(they) knock like crazy people/ beside themselves

The quasi-existential interpretation depends on the specific time reference of the clause, (62). The construction is incompatible with generic time reference, (63), compatible with the existence of a single individual satisfying the description, (64), and restricted to the external θ -position, (65) (see Cinque 1988c for quasi-existential arbitrary interpretation):

- (62) a. Es klopfte um sechs Uhr.
it knocked at six
- b. Es hat geklopft.
it has knocked
- (63) *Es klopft immer leise bei mir.
it knocks always quietly at my door

- (64) Es klopfte. Es war Hans.
it knocked. It was H.
- (65) *Es klopfte. Ich habe es hereingelassen.
it knocked. I have it let come in

Because of the arbitrary interpretation, only a [+human] referent is compatible with the construction:

- (66) *Es klopfte. Es war ein Hund.
it knocked. It was a dog

Notice that in these quasi-existential contexts, the impersonal pronoun *man* corresponding to English *one* is excluded:

- (67) *Man klopfte. Es war Hans.
one knocked. It was H.

In sentences with specific time reference, *man* triggers an interpretation similar to that of Italian [-arg] *si* (Cinque 1988c). It always includes the speaker, and can be roughly paraphrased with the 1st pers. pl. pronoun *wir*, "we" (the same is true of English *one*, cf. Hoekstra and Roberts 1988).

Interestingly, cross-linguistic evidence for an arbitrary lexical pronoun in the Germanic domain can be provided. The relevant evidence comes from Icelandic, where an arbitrary null subject corresponding in meaning to *one* in English is licensed in the following contexts (see Sigurðsson 1989):

- (68) a. Ekki skal pro harma þetta.
not shall deplore this
- b. Má pro skila bókinni seinna?
may return the-book later

However, like any null subject, *pro* cannot occur in specC' position since it is not licensed there (see 1.4.2.). The following sentences are ungrammatical:

- (69) a. *pro skal ekki harma þetta.
b. *pro má skila bókinni seinna.

A grammatical representation is only obtained if a lexical pronoun is inserted. As expected, the lexical pronoun *það* will be used in this case,

which is the equivalent of German pronoun *es* (see 1.4.2. for quasi-argumental *það* in Icelandic):

- (70) a. *Pað skal ekki harma þetta.*
 b. *Pað má skila bókinni seinna.*

2.5.3. The grammatical features of "arb" in German

Notice that if *es* is an arbitrary pronoun, this suggests that the features of arbitrary NPs in German are [3rd person, singular, neuter]. This means that not only the number value of *arb* is submitted to parametric variation across languages (see [plural] in Italian vs. [singular] in Spanish), but also gender features can be parametrized. Italian and other Romance languages take [masculine] as the value for *arb*, whereas German (and Icelandic) appears to choose [neuter]. This suggests that a neuter element is compatible with [+human] referents. A further instance of a neuter element referring to humans can be found in German. It involves the quantifier *alles*, which, as pointed out by Giuliana Giusti (p.c.), occurs in infinitival imperatives of ergative verbs, in past participle imperatives of ergative and, marginally, intransitive verbs, and in the object position of verbs and prepositions (see also Giusti 1988):^(12, 13)

- (71) *Alles aussteigen!*
 all descend

- (72) a. *Alles aufgewacht!*
 all woken up

- b. ?? *Alles gegähnt!*
 all yawned

- (73) a. *Jetzt wird alles angerufen, was Geld hat.*
 now is everyone called up what (=who) money has

- b. *Hier wird an alles gedacht.*
 here is to everybody thought

2.5.4. Arbitrary "pro" in German

As we saw, no arbitrary null pronominal is possible in impersonal

middles. There are however instances of arbitrary subject *pro* in German (for arbitrary object *pro*, see 1.4.3.).

As pointed out to us by Gerhard Brugger (p.c.), the VP embedded under *lassen*, "let", seems to contain an argumental null subject. The same can be claimed for the VP embedded under perception verbs: ⁽¹⁴⁾

(74) a. Ich lasse [pro die Katze streicheln].
I let the cat stroke

b. Ich höre [pro ein Lied singen].
I hear a song sing

The null subject in (70) displays marginal syntactic activity:

(75) a. ?Ich ließ ein Lied miteinander dichten.
I let a song with each other compose

b. ?Ich sah/ ließ Bücher verkaufen, um Geld für die Reise zu sammeln.
I saw/ let books sell in order money for the journey to collect

c. Ich ließ Lieder singen, ohne Noten zu verwenden.
I let songs sing without notes to use

The null subject receives a quasi-existential arbitrary interpretation. It is compatible with specific time reference, (76), compatible with the existence of a single individual satisfying the description, (77), and restricted to external argument positions, (78):

(76) a. Ich ließ gestern die Katze streicheln.
b. Ich hörte gestern ein Lied singen.

(77) a. Ich ließ die Katze streicheln. Hans wollte es.
b. Ich hörte ein Lied singen. Es war Hans.

(78) a. *Ich lasse kommen
b. *Ich hörte kommen.

Lassen and the perception verbs are exceptional Case markers. They assign accusative Case to the embedded subject:

(79) a. Ich lasse ihn kommen/ schlafen.
b. Ich höre ihn kommen/ schlafen.

The specV' position is therefore a +Case position. Differently from what happens in middles, a null subject is licensed in this position. We would like tentatively to suggest that the embedded verb is the licensing head for this instance of null subject. The lexical category V° belongs to the set of licensing heads in German (see 1.4.3.). As we proposed there, a lexical category can only license a null pronominal to which it assigns a θ -role. Since the verb assigns a θ -role to the null subject, it can also license it. Licensing by the other governor of the null subject, i.e. the matrix verb, is excluded by this constraint. Since the matrix verb does not assign a θ -role to the lower specV', it cannot license the null subject occurring in this position.⁽¹⁵⁾

Given the fact that the verb agrees with the external argument in its specifier position, formal licensing takes place in (74) via spec-head agreement (see 1.2.2.). We assume that the identification of *pro* takes place through the assignment of arbitrary interpretation to it, the grammatical features assigned by default, language-specific rules. As we saw above, arbitrary pronouns in German are marked [human, 3rd pers, singular, neuter].

Gerhard Brugger (p.c.) also points out that there is a further lexical entry of the verb *lassen*, a medialized *lassen*, which lacks the capability of assigning the external θ -role and accusative Case. The D-structure will be something like (80):⁽¹⁶⁾

(80) a. lass- sich [vp pro Katzen streicheln]

b. lass- sich [vp pro gut arbeiten]

Since no structural Case is assigned by *lassen* to the specV' position and since *sich* also blocks the assignment of structural accusative to the object position of the transitive verb, we expect the same situation as in middles to hold: either, there is a D-structure licensed *pro* in (80a) with raising of the logical object into the matrix subject position, or the lexical arbitrary pronoun *es* is inserted in (80b). Both expectations are borne out:

(81) a. Katzen lassen sich leicht streicheln.

b. Hier läßt es sich gut arbeiten.

2.6. Middles in raising and control contexts

Both middle constructions can be found in raising contexts:

- (82) a. Linguistikbücher scheinen sich leicht zu lesen.
linguistics books seem SICH easily to read
- b. daß es sich hier gut zu leben scheint.
that it SICH hier nicely to live seems

In these sentences, *Linguistikbücher* and *es*, respectively, are raised to the matrix clause in order to receive nominative Case. Differently from what happens in Italian, where the middle *si* remains in the embedded clause,

- (83) Questo libro sembra leggersi facilmente.
this book seems read-SI easily

sich must also raise and cliticize in the matrix clause. An adverb between the derived subject or *es* and *sich* is impossible:

- (84) a. *daß das Buch hier sich gut zu verkaufen scheint.
that the book here SICH well to sell seems
- b. *daß es hier sich gut zu leben scheint.

Since middle formation is only possible with external θ -roles (see (35) above), *sich* cannot be generated in the matrix clause, as is the case in the Italian sentence (85):

- (85) Spesso si risulta non essere in regola. (Cinque 1988c:522)
often SI turns-out not be in order

Sich in (82) is raised from the embedded to the matrix clause. The obligatory raising of *sich* in German can be interpreted as the consequence of the clause-union process that takes place with German *scheinen*. The contrast between (82a) and (83) is therefore only apparent.

Both in Italian (Cinque 1988c) and German, middles can appear in infinitival clauses:

- (86) a. ?Questo vestito ha il vantaggio di lavarsi molto più facilmente
di altri.
this suit has the advantage of wash-SI much more easily than
others
- b. ?Dieses Buch hat die Eigenschaft, sich einfach zu lesen.
this book has the property SICH easily to read

However, impersonal middles cannot:

(87) a. *Es ist schön, es sich hier gut zu leben.
it is nice it SICH here nicely to live

b. *Es ist schön, PRO sich hier gut zu leben.

Both sentences of (87) are ruled out. (87a) is easily excluded because the pronoun *es* fails to be assigned nominative Case. But why is (87b) ungrammatical? We would like to suggest that PRO behaves like referential NPs in having a referential index (see (56) above) and being incompatible to occur with the pronoun *sich*. Notice that the same is true with impersonal *si* in Italian (Belletti 1982, Cinque 1988c):

(88) a. *Sarebbe meglio PRO lavorarsi un po' di più.
(it) would-be better work-SI a little more

b. *Qui c'è il vantaggio di PRO dormirsi bene.
here there is the advantage of sleep-SI well

(89) *Sarebbe meglio PRO arrivarsi puntuali.
(it) would-be better arrive-SI punctually

Sentences (88), where the analysis with [+arg] *si* is available, are ruled out by the often observed lack of expletive PRO. The analysis with [-arg] *si*, available in both (88) and (89), implies that a [+arg] pronoun occurs in subject position. Belletti (1982) claimed that *si* and PRO are incompatible. It is clear that no semantic incompatibility obtains between *si* and PRO. PRO can be controlled by arbitrary *si* in (90) and receives arbitrary interpretation in (91):

(90) Sembra lavorarsi bene qui senza PRO faticare troppo.
(it) seems work-SI well here without toil too much

(91) a. Sarebbe meglio PRO lavorare un po' di più.
b. Qui c'è il vantaggio di PRO dormire bene.
c. Sarebbe meglio PRO arrivare puntuali.

If, as we said in 1.2.1., arbitrary PRO is also an instance of controlled PRO (cf. Epstein 1984), as is formally represented in the anaphoric feature of this empty category, we can interpret the incompatibility of PRO and *si* in

the above terms: PRO has a referential index and cannot receive the arbitrary interpretation associated with *si*. Notice that the sentences in (88)-(89) are of course possible without *si* (see (91), as is also the case of German (87b)).

In the next section, we will show that the ungrammaticality of (87b) in German must be explained along the lines suggested above and cannot be traced back to Case-theoretical reasons.

2.7. Case properties of impersonals

Sentences like (88), here repeated as (92), can also be excluded on the basis of the failure of nominative Case assignment to *si* (cf. Cinque 1988c):

- (92) a. *Sarebbe meglio lavorarsi un po' di più.
 b. *Qui c'è il vantaggio di dormirsi bene.

This is supported by the observation that impersonal *si* is grammatical in the raising context of (93), where nominative Case is available:

- (93) Sembra non essersi lavorato a sufficienza.
 (it) seems not be-SI worked sufficiently

If inheritance of Case from the matrix clause into the embedded clause must be excluded (see the discussion in 2.2.2.), sentence (93) cannot be represented as in (94), because neither *pro* in the infinitival clause nor *si* cannot be marked nominative. The grammatical representation of (93) is (95), parallel to (18) and (19b) above:

- (94) *pro* sembra [*pro* non essersi lavorato a sufficienza]

- (95) *pro* sembra [*t* non essersi lavorato a sufficienza]

In (95), the expletive *pro* is raised to the matrix clause in order to be marked with nominative and *si* in chain with it also receives a Case.

However, the German sentence (87b) cannot be excluded on the basis of lack of Case assignment to *sich*. First, notice that *sich* cannot be in the same nominative-marked chain with *es*, both being lexical elements. However, *sich* can be assigned a Case other than nominative. Since specV' is a position of partitive Case assignment in German, if *sich* forms a chain with this position it enters a Case-marked chain. Hence, the ungrammaticality of (87b) must be explained in the terms we suggested in

2.6.

This proposal can be extended in order to account for the apparent lack of Case assignment to the passive morphology in an impersonal passive (see 2.2.2. above). It is possible to suggest that also the passive morphology enters a partitive-Case marked chain with specV'. This analysis provides a straightforward account for the curious, otherwise unexplained Definiteness effect found in impersonal passives (from Roberts 1987:293,fn.10):

- (96) a. Es wurde von allen getanzt.
it was by everyone danced
- b. Es wurde von drei Männern getanzt.
it was by three men danced
- c. Es wurde von der Jugend getanzt.
it was by the youth danced
- d. ? Es wurde vom Mann getanzt.
it was by-the man danced
- e. ?? Es wurde von ihm getanzt.
it was by him danced
- f. * Es wurde von Johann getanzt.
it was by J. danced

If only an indefinite NP is compatible with the partitive Case assigned by the verb to the passive morphology, the pattern in (96) follows.

If partitive Case plays a crucial role in impersonal passives, the following contrast between German and French can also receive a principled account. Whereas (97a) is grammatical in French, (97b) is only marginally accepted in German:

- (97) a. Il a été mangé beaucoup de gâteaux ici.
it has been eaten many of cakes here
- b. (??) Es wird jetzt gerade Lyrikgedichte vorgelesen.
it is right now lyrical poems read

The contrast can be explained if partitive Case is available for the logical object in French (cf. Belletti 1988a and the references cited there), but not

in German, where it is assigned to the passive morphology. In German, the object is understood as incorporated into the verb (cf. Abraham 1986), this being probably a marked process. If this analysis is correct, (97a) is more similar to a "personal" passive than to the impersonal passives found in German. The passive morphology receives accusative Case, and nominative is assigned to expletive *il*, which triggers agreement on the verb because of its number feature (cf. Belletti 1988a: fn.43).

2.8. Impersonal middles with transitive verbs

The process we proposed in 2.5. for impersonal middles cannot be *a priori* excluded for transitive verbs, and is in fact marginally found. Sentence (98) illustrates the point. Notice that there is no agreement between the verb and the object, and *es* is obligatory:

- (98) (?)? Hier lernt es sich Frauen einfach kennen.
 here knows it SICH women easily

As expected, the external argument is present, as shown by the fact that it is syntactically active:

- (99) Romane liest es sich krank sehr leicht.
 novels reads it SICH sick very easily

The construction shows the Definiteness effect. It is only possible with indefinite objects (see (98)) and impossible with definite ones:

- (100) *Hier lernt es sich diese Frauen einfach kennen.

The same is found with the middle construction embedded under *lassen* (see 2.5.3.):

- (101) a. *Hier läßt es sich diese Katze streicheln.
 b. Hier läßt es sich Katzen streicheln.

If partitive Case is assigned here to *sich*, the logical object can be interpreted as incorporated. The same situation as in the impersonal passive of (97b) obtains. As above, let us look at the corresponding *se*-construction in French, which is impossible with definite objects and grammatical with indefinite ones (cf. Cinque 1988c):

- (102) a. *Il se mange souvent les gâteaux ici.
it SE eats often the cakes here
- b. Il se mange souvent des gâteaux dans ce bistrot.
it SE eats often of cakes in this café

In (102), *se* absorbs both external θ -role and structural accusative, so that only an inherent (partitive) Case is available for the object. The Definiteness effect is therefore expected. If it is true that there is a contrast between French (102b) and German (98), our account of the Case properties of impersonal passives and impersonal middles seems to find further support.

2.9. Some comparative remarks

We said that the possibility of impersonal middles in German correlates with the possibility of impersonal passives in the same language. We have also discussed the role of partitive Case in impersonal constructions. If *specV'* is a Case-position in German, it follows that *sich* and the passive morphology will enter Case-marked chains also in the case of intransitive verbs.

It is clear that the correlation of partitive Case assignment to *specV'* with the possibility of forming passives and middles from intransitive verbs must find support from a wide cross-linguistic study. We will not attempt this here. We will however show that a look at languages like Italian, Dutch and French seems to support the suggested correlation.

In Italian, partitive Case is not assigned to the subject of transitive and intransitive verbs:

- (103) a. *Ne invitano Maria alla festa.
of-them invite M. to-the party
- b. *Ne telefonano domani.
of-them phone tomorrow

As expected, no impersonal passive is found:

- (104) *E' stato ballato.
(it) is been danced

We expect that no impersonal middle is also possible. This is however hard

to verify, given the availability of the impersonal *si*-construction. A sentence like (105):

- (105) Qui si dorme bene.
here SI sleeps well

is indistinguishable from the impersonal *si*-construction.

In Dutch, where partitive Case is available in specV' (see the discussion of (49)-(50) above), both impersonal passives and impersonal middles (cf. Abraham 1987, Hoekstra and Roberts 1988) are found:

- (106) a. Er wordt gedanst.
there was danced
- b. Hier danst het lekker.
here dances it nicely

In French, partitive Case can be marginally assigned by an intransitive verb:

- (107) ?Il parle beaucoup de linguistes à ce congrès.
it speaks many of linguists at this conference

The correlation of the possibility of impersonal passives with the possibility of impersonal middles seems however to be contradicted. In French, an impersonal passive is marginally accepted, but an impersonal middle is ungrammatical:

- (108) a. ?? Il a été chanté/ travaillé ici récemment.
it has been sung/ worked here recently
- b. * Il se chante/ travaille bien ici.
it SE sings/ works well here
- (109) a. ?? Il a beaucoup été dormi dans ce lit.
it has much been slept in this bed
- b. * Il se dort bien sur ce lit.
it SE sleeps well on this bed

If it can be proved that the b. sentences of (108) and (109) are independently excluded, the association of impersonal passives and impersonal middles

can be maintained. As suggested by Adriana Belletti (p.c.), in (108b) and (109b), there is no element that can bear the external θ -role, *il* not being able to occur as an arbitrary pronoun in French.⁽¹⁷⁾

2.10. Conclusions

In this chapter, we have proposed that the impersonal middle construction is an instance of middle formation and not an impersonal construction like the *si*-constructions found in Italian. An impersonal middle shares all the properties of middles formed from transitive verbs.

The *es* occurring in impersonal middles is an arbitrary pronoun. This means that the grammatical features of *arb* in German are [human, 3rd person, singular, neuter]. The fact that *arb* is [neuter] in German suggests that also the gender features of *arb* are parametrized across languages.

The above analysis entails that *es* is an argument, as expected under the framework outlined in Chapter 1. The arbitrary pronoun is lexical in impersonal middles, given the licensing properties of German C° (see 1.2.2.). There are however some instances of null arbitrary external arguments in German. These concern arbitrary *pros* that can remain in *specV'*, where they are licensed through assignment of partitive Case. Partitive Case assignment plays a crucial role in impersonal constructions. We have tentatively suggested that in German, the possibility of impersonal middles and impersonal passives correlates with the assignment of partitive Case to *specV'*. This proposal is supported by comparisons with Italian, French and Dutch. A wider cross-linguistic study is however required in order to substantiate the analysis.

Notes to Chapter two

1. For different approaches to the ungrammaticality of anaphors in subject position, see Giorgi 1989, Longobardi 1989, Rizzi 1989.

2. This conclusion must also be reached for impersonal passives in French:

(i) ?? Il a beaucoup été dormi dans ce lit.
it has much been slept in this bed

Here, the lexical expletive *il* requires Case. If nominative is assigned to it (see Cinque 1988c:fn.56), the passive morphology is apparently not assigned any Case. See 2.7. below for further discussion of the Case properties of impersonal passives.

3. We also differ from two further accounts of *es* in impersonal middles in German. Abraham

(1986) regards *es* as a domain indicator for the verbal operator *sich*, which represents the lexicalization of a generic verbal operator marking middle formation. Pitz (1988) treats *es* as a lexical expletive inserted in the vacated external argument position. Both accounts consider middle formation as a lexical process. That this cannot be true at least for impersonal middles is shown by the syntactic activity of the external argument (see 2.3.), which would not be expected if the external θ -role were eliminated in the lexical structure, as plausibly happens with ergative verbs (cf. Burzio 1986).

4. The same is observed in impersonal passives (cf. Roberts 1987:279):

- (i) *Es wurde von Mücken getanzt.
it was by mosquitoes danced

(Cf. the grammatical active sentence: *Die Mücken tanzen*, "the mosquitoes dance").

5. For the discussion of an unifying treatment of impersonal, middle and reflexive *si* in Italian, see Cinque (1988c). This can be extended to German *sich*. See also Haider and Rindler-Schjerve (1987).

6. As expected, a dative reflexive *sich* allows cliticization of an object *es*. (i) contrasts with (42):

- (i) daß er sich's leichter macht als früher.
that he himself it easier makes than before

7. This possibility was suggested, although excluded, by Roberts (1987). Under the recent proposals that the external argument is generated in specV' , the move of assuming a VP-internal, pronominal "implicit" argument is straightforward.

8. We depart here from the accounts proposed by Bennis (1986) and Haegeman (1987b).

9. An *als*-phrase referring to the derived subject is of course possible:

- (i) Der Apfel ißt sich als Nachspeise.
the apple eats SICH as dessert

10. The cooccurrence of [+arg] *si* and a lexical NP is excluded by the θ -criterion.

11. Interestingly, Paul (1916-1920:vol. III.4, p. 29) treats the *es* occurring in impersonal middles as belonging to the same class of the *es* in (58).

12. *Alles* is also used in the presentative construction of (i), where it quantifies and agrees with the 3rd pers.sing. pronoun *das* (cf. Giusti 1988):

- (i) a. Das alles sind arme Leute.
this all are poor people
b. Das sind alles arme Leute.

(i) shows that *alles*, although not restricted to humans (see (ii)), is compatible with them:

- (ii) Das ist alles saure Milch.
this is all sour milk

13. Notice, incidentally, that arbitrary *es* cannot be quantified by *alles*. The following sentences are ungrammatical:

- (i) a. *Hier lebt es alles sich gut.
here lives it all SICH well
b. *Hier lebt es sich alles gut.
(ii) a. *Es alles klopfte zusammen.
it all knocked together
b. *Es klopfte alles zusammen.

Notice that *alles* is also impossible in impersonal passives:

- (iii) *Hier wird alles getanzt.
here is all danced

If an arbitrary pronoun cannot be quantified, the ungrammaticality of (i)-(iii) follows. Notice that in Italian, arbitrary *pro* can be apparently quantified (cf. Cinque 1988c):

- (iv) A Venezia, si vive tutti bene.
in Venice SI lives all well

As pointed out to me by Giuliana Giusti (p.c.) and Cecilia Poletto (p.c.), (iv) seems however to be grammatical only with the 1st person plural interpretation including the speaker, although the generic time reference should allow an arbitrary reading.

14. The lack of the infinitival morpheme *zu* supports the non IP-status of the complement of *lassen* and perception verbs (cf. Giusti 1989). Notice also that if the embedded clause were an IP, *pro* could not be licensed, I° being a non-licensing head in German (see Guasti 1989 for the suggestion that in null-subject languages like Italian and Spanish, the infinitival I° licenses the null subject of the complement to perception verbs).

If, in the spirit of Pollock (1987), the infinitival morphology heads its own projection, TP and not VP is the categorial status of the complement of *lassen* and perception verbs.

15. Given the further constraint of affectedness on licensing (cf. Rizzi 1986), perception verbs can never license a null object.

16. Causative *lasciare* and *fare* in Italian are also possible in middle sentences:

- (i) a. Questa minestra si fa mangiare.
this soup SI makes eat
b. Questo romanzo si lascia leggere.
this novel SI lets read

17. In French, also impersonal *se* is impossible with an intransitive verb:

- (i) *Il se dort ici.
it SE sleeps here

Cinque (1988c) accounts for (i) in terms of Case theory: *Se* is dependent on *il* in order to receive nominative, *il* in French can however only be associated with a clause.

CHAPTER THREE

EXTRAPOSITION *ES*

3.1. Contexts with apparently optional "es"

There are some configurations in which *es* and *pro* do not appear in complementary distribution, as was the case in all the constructions discussed in Chapter 1 and Chapter 2. With extraposed clauses like those in (1), both appear to be possible in subject position, although the variant without *es* seems to be more marginal in (1a) than in (1b):

- (1) a. daß ??(es) ihn überrascht hat, daß er angerufen hat.
that it him surprised has that he phoned has
- b. daß (es) ihm mitgeteilt wurde, daß er angerufen hat.
that it to-him said was that he phoned has

Under the analysis proposed in Chapter 1 and summarized there in (74), we do not expect to find *es* and *pro* in the same contexts. The external argument position cannot in fact be both + θ allowing *es* and - θ allowing *pro*. Such a situation would violate the projection principle.

Let us postpone the discussion of (1a) to 3.7. and concentrate here on (1b). In (1b), no external θ -role is available. According to the analysis outlined in Chapter 1, no lexical expletive *es* is expected.

Sentences like (1b) are in fact a problem for every theory of German *es*. Safir (1985) treats the *es* of (1b) as an expletive in subject position which can be optionally dropped since its presence is not required by any principle. However, such an approach cannot explain why the Avoid Pronoun Principle would optionally apply in (1b) and obligatorily in (26) of Chapter 1, given the fact that in both cases an expletive empty pronominal would be allowed.

Tomaselli (1986) regards the *es* occurring in (1b) as an expletive pronoun, inserted in subject position on analogy with the extraposition case of (2) where *es* bears the θ -role assigned by the verb:

- (2) daß es mich ärgert, daß er sich so benommen hat.
that it me irritates that he himself so behaved has

Apart from the conceptual problems they present, neither of these approaches can explain why in sentences like (1b) there are differences in

the acceptability of *es* depending on the choice of the predicate. The judgments are very subtle and differ from speaker to speaker (see a discussion in Ulvestad and Bergenholtz 1979). However, they go in the direction indicated in (3):

- (3) a. Vom Angeklagten wurde (es) sehr bedauert, daß er die Tat mitgeplant hatte.
by-the accused was it much regretted that he the fact planned had
- b. Gestern wurde (?es) nicht behauptet, daß er gewonnen hatte.
yesterday was it not asserted that he won had
- c. Gestern wurde (??es) behauptet, daß er gewonnen hatte.

It is possible to give a natural solution to both problems if we treat *es* in sentences like (1b) not as a lexical expletive but as an argumental *es*, generated in object position and bearing the internal θ -role. The clause with which it is in construction will occur in an adjoined position. This is in essence the analysis given by Hoekstra (1983), Travis (1984) and Bennis (1986) for the Dutch equivalent of (1b).⁽¹⁾

This analysis confirms our hypothesis that there is no expletive *es* in an A-position, and that an *es* in an A-position is always an argument. It is also possible to show that when no *es* is present in sentences like (1b), no raised argumental *pro* occurs in subject position, again in accordance with our hypothesis formulated in Chapter 1.

Before turning to the exact status and the position of the embedded clause when *es* is present, we would like to discuss empirical evidence that the *es* of (1b) does not behave as an expletive but as an argumental *es*,⁽²⁾ and displays the same properties as the anticipatory pronoun *es* in active sentences, which cannot be an expletive given that it occupies a + θ position:

- (4) Ich habe es nicht behauptet, daß er gewonnen hatte.
I have it not asserted that he won had

3.2. On the status of the pronoun "es"

Let us begin with the contrasts in (5), which could not be explained if *es* were analysed as an expletive. The facts are quite puzzling at first sight, because *es* seems to be impossible in some cases and almost obligatory in others:

- (5) a. Dann wurde (*es) berichtet, daß die Straße doch gebaut werde.
then was it reported that the street build would
(Pütz 1975:80)
- b. Schon lange wurde (??es) vermutet, daß dieser Schüler faul ist.
already long was it suspected that this pupil lazy is
- c. Gestern wurde ??(es) aufgegeben, nach Hause zu gehen.
yesterday was it given up to home to go
- d. Jetzt wird ??(es) nicht mehr ertragen, daß du dich so benimmst.
now is it no longer tolerated that you yourself so behave
- e. Gestern wurde *(es) abgelehnt, daß die Sozialisten gewonnen haben.
yesterday was it rejected that the Socialists won have

No such differences are found in (30) in Chapter 1, where expletive *es* occurs. If we consider *es* as an argument, we can explain them by comparing the passive sentences in (3) and (5) with their active counterparts, which display the same pattern with object *es*:

- (6) a. Der Angeklagte bedauerte (es), daß er die Tat mitgeplant hatte.
b. Er behauptete (??es), daß er gewonnen hatte.
c. Er berichtete (*es), daß die Straße doch gebaut werde.
d. Der Lehrer hat (??es) schon lange mit guten Gründen vermutet,
daß dieser Schüler faul ist.
e. Hans hat ??(es) gestern aufgegeben, nach Hause zu gehen.
f. Ich ertrage ?(es) nicht, daß du dich so benimmst.
g. Peter lehnt *(es) ab, daß die Sozialisten gewonnen haben.
(Pütz 1975:88)
- h. Peter lehnt *(es) ab, schmutzige Wäsche zu tragen.
P. rejects it dirty clothes to wear
(Pütz 1975:142)

What we find is the same type of contrasts as in (3) and (5): The presence or absence of *es* in the active form depends on the choice of the lexical entry (see Pütz 1975:70 for a list of verbs that usually do not take *es*). There is a strong tendency to prefer *es* with a factive verb (see Kiparsky and Kiparsky 1970) such as *bedauern*, even if not used as factive (see (7b-c)); *es* is however also possible with non-factive predicates (see (8)):⁽³⁾

- (7) a. Ich bedauere es, daß er nicht gekommen ist.
I regret it that he not come is
- b. Erna liebt es, täglich Blumen zu bekommen. (Pütz 1975:85)
E. likes it daily flowers to receive
- c. Ich bejahe es, daß Peter den Berg besteigt. (Pütz 1975:83)
I confirm it that P. the mountain climbs
- (8) a. Sie hat es gestern mehrmals gesagt, daß sie krank ist.
she has it yesterday many times said that she sick is
- b. Gesagt hat sie es mehrmals, daß sie krank ist.
- c. Gesagt wurde es mehrmals, daß sie krank ist.

Notice that *es* is impossible when the verb subcategorises for an indirect question. The ungrammaticality of (9a) only follows if *es* is not an expletive in subject position but an argument generated in object position; the sentence patterns with its active counterpart, where *es* is also impossible:

- (9) a. Gestern wurde (*es) gefragt, ob er mitfahren wollte.
yesterday was it asked whether he travel wanted
- b. Ich habe (*es) gefragt, ob er mitfahren wollte.
I have it asked whether he travel wanted

Second, when the verb subcategorises for a PP, realized in the case of a complement clause by the prepositional adverb *da* + preposition, a pronoun such as *es* is impossible, both in the active and in the passive:

- (10) a. Ich verzichte (*es) darauf, nach London zu fahren.
I give up it to L. to go
- b. Darauf wurde (*es) verzichtet, nach London zu fahren.

If *es* in a passive clause were an expletive in subject position, there would be no principled way to exclude (10b). Only if *es* counts as an argument can we explain why it cannot cooccur with another argument such as *da* in both (10a) and (10b): This would lead to a violation of the θ -criterion.

Third, if *es* in (1b) were an expletive in subject position, we would predict that it can cooccur with the embedded clause in the *Mittelfeld*, given the fact that a complement clause can marginally appear to the left of the finite verb. The contrast in (11) suggests however that *es* is not an expletive but an argument and that (11b) represents a violation of the θ -criterion, since there are two arguments, *es* and the clause, and only one θ -role:

(11) a. ?? daß gestern, daß er gekommen ist, gesagt wurde.
that yesterday that he come is said was

b. * daß es gestern, daß er gekommen ist, gesagt wurde.

Notice also that when a complement clause is topicalised, no *es* can be present:

(12) a. Daß der Franz den Josef so bewundert, wundert (*es) manchen.
that the F. the J. so admires surprises it some
(Pütz 1975:18)

b. Daß der Franz den Josef so bewundert, glaube ich (*es) nicht.
that the F. the J. so admires believe I it not

This can follow from the fact that in a topicalised structure, only an empty category is possible in A-position either linked to the topicalised clause itself (CP_i *wundert e_i manchen*) or to an empty operator in specC' coindexed with the clause in TOP-position ($CP_i Op_i$ *wundert e_i manchen*), depending on the analysis one assumes for (German) topicalisation (see Cardinaletti 1986 for a discussion). In any case, if *es* is not an expletive, we would expect that in a passive clause no *es* can be present either. This is indeed what we find: ^(4, 5)

(13) Daß der Franz den Josef so bewundert, wird (*es) von niemandem geglaubt.
that the F. the J. so admires is it by noone believed

When *es* appears in specC' in a passive clause (see (14a)), it behaves like any other nominative pronoun (see (14b)) as well as the expletive *es* in (15), which is marked nominative (see 1.4.2.):

(14) a. Es wurde gesagt/ bedauert, daß er nicht gekommen ist.
it was said/ regretted that he not come is

- b. Es (= das Kind) hat heute nicht gegessen.
it (the child) has today not eaten

- (15) Es wurde getanzt.
it was danced

Indirect evidence on the status of *es* in (14a) comes from the active counterpart of the sentence, where *es* behaves like any other accusative object pronoun in being impossible in specC'. If it were an expletive, we would expect it to occur in this position, as in (15):

- (16) a. *Es hat Hans gesagt/ bedauert, daß er nicht gekommen ist.
b. *Es hat Hans nicht gesagt/ bedauert.

Furthermore, like any other D-structure object *es*, it can cliticize to a preceding dative pronoun, whereas this is not possible for D-structure subjects:⁽⁶⁾

- (17) a. ?daß ich ihm's gestern vorgeschlagen habe.
that I to-him it yesterday proposed have
b. ?daß ihm's gestern vorgeschlagen wurde.
c. ?daß ich ihm's gestern vorgeschlagen habe, daß er kommen sollte.
that I to-him it yesterday proposed have that he come should
d. ?daß ihm's gestern vorgeschlagen wurde, daß er kommen sollte.
- (18) a. *daß ihm's geholfen hat. ('s = das Mädchen)
that to-him it helped has (it = the girl)
b. *daß ihm's vertraut hat. (" ")
that to-him it trusted has
c. *daß ihm's seine Vorhersagen beweist, daß Hans nicht gekommen ist.
that to-him it his predictions proves that H. not come is

If *es* were an expletive and occupied the subject position, the cliticization in (17d) would be impossible.

As a last piece of evidence, an observation of Pütz (1975:37) can be used. Like any other neuter subject and object, the *es* which anticipates an extraposed clause can be substituted by *das*:⁽⁷⁾

- (19) a. Das stimmt nicht, daß er recht hat.
that is-true not that he right has
- b. ?Er hat das schon seit Anfang an bedauert, daß er die Tat
mitgeplant hat.
he has that already from beginning regretted that he the fact
planned has
- (20) a. Das ist sehr schön.
that is very nice
- b. Ich mag das nicht.
I like that not

The same is true in the passive case:

- (21) a. ?Das wurde schon seit Anfang an bedauert, daß er die Tat
mitgeplant hatte.
- b. Das kann nicht gelesen werden.
that can not read be

This is not possible for the real expletive in specC', which again shows that the *es* of (1b) is not an expletive subject:

- (22) a. *Das ist gestern ein Mann gekommen.
that is yesterday a man come
- b. *Das wurde gestern getanzt.
that was yesterday danced

We have discussed empirical evidence that the *es* which occurs in a passive sentence linked to an extraposed clause is not an expletive subject, but an argumental *es*, which bears the internal θ -role assigned by the verb. It is exactly the same *es* that occurs with an active verb and is generated in the object θ -position. This brings us to the conclusion that in passive clauses with a sentential complement there is no expletive lexical pronoun in subject position, as expected under our analysis in Chapter 1.

3.2.1. Ergative verbs

The same conclusion can be reached for the *es* cooccurring with an extraposed clause as the derived subject of an ergative verb. The same tests used above for the passive case can be applied in the ergative contexts. Although the comparison with the active counterpart is no longer possible, we obtain the same results.

The presence of *es* is lexically constrained. It is preferred with some verbs and excluded with others (examples from Marx-Moyse 1983):

- (23) a. Heute fällt es mir schwer, von der Stiftung der Bunkerkirche
gradlinig zu erzählen. (p.28)
today is it to-me difficult about the institution of B. straight-
forward to tell
- b. Eindeutig geht aus ihnen nämlich hervor, daß [...] (p.16)
evident turns from them in fact out that

When the embedded clause is topicalised, *es* cannot occur:

- (24) Daß er morgen kommt, steht (*es) fest.
that he tomorrow comes is it fixed

Like a D-structure object pronoun, the *es* of (23) can be cliticized to a preceding dative pronoun, and can be substituted by the pronoun *das*:

- (25) a. ?daß ihm's gelungen ist, den Hans zu besiegen.
that to-him it successful was the H. to beat
- b. ?daß mir's auf die Nerven geht, daß du immer recht hast.
that to-me it on the nerves gets that you always right have
- (26) Das geht mir auf die Nerven, daß du immer recht hast.

3.3. On the status of the embedded clause

We have provided substantial evidence that the pronoun *es* in construction with a clause counts as the argument of the verb, when it is present. We can predict that the clause cannot also count as an argument, otherwise the θ -criterion would be violated. Along the lines of Hoekstra's (1983) proposal for Dutch, we regard the embedded clause as a

non-argument generated in an adjoined position and giving a content to the pronoun *es*. This analysis seems superior to one that treats the pronoun as an expletive in A-position and the clause as the real argument of the verb (see Postal and Pullum 1988 for a recent discussion of the corresponding English cases). Empirical evidence that the clause does not behave as the internal argument of the verb when *es* is present can in fact be provided.

First, the embedded clause cannot be a verb-second clause when *es* is present (see Ulvestad and Bergenholtz 1979):

- (27) a. Sie hat (*es) gesagt, sie ist/ sei krank.
 she has it said she is/ is-SUBJ sick
- b. Sie sagt (*es), sie ist/ sei krank.
- c. Gesagt hat sie (*es), sie ist/ sei krank.
- (28) a. Jetzt steht (*es) fest, er kommt morgen.
 now is it fixed he comes tomorrow
- b. Mir scheint (*es), er ist krank.
 to-me seems it he is sick

An embedded verb-second clause can only occur as the internal argument of N° , V° and A° (cf. Reis 1985, Cinque 1988b). It is ungrammatical as the external argument of the verb and in adverb positions:

- (29) a. *Er ist nicht gekommen, macht nichts.
 he is not come makes nothing
- b. *Es macht nichts, er ist nicht gekommen.
- (30) *Ohne, er kommt persönlich, können wir keine Entscheidung treffen.
 without he comes personally can we no decision take

We can conclude that the clause cooccurring with *es*, which cannot be a verb-second clause, is not a complement of the verb.

Second, a verb in the so-called subjunctive 1 cannot occur in the embedded clause if *es* is present:

- (31) a. ?* Sie hat es uns gestern gesagt, daß sie krank sei.
 she has it to-us yesterday said that she sick is-SUBJ
- b. Sie hat gestern gesagt, daß sie krank sei.

This subjunctive cannot appear in clauses which are not selected by the verb, neither in subject nor adverbial clauses:

- (32) a. *Daß die Erde rund sei, beweist/ würde beweisen, daß er recht hat.
 that the earth round is-SUBJ proves/ would prove that he right has
- b. *Daß er ein Auto kaufe, bedingt, daß er viel sparen muß.
 that he a car buys-SUBJ involves that he much save must
- (33) *Er hat sie getroffen, nachdem sie in die Stadt gegangen sei.
 he has her met after she to the town gone is-SUBJ

Semantic reasons do not seem to be sufficient to account for these facts. It is usually claimed by traditional grammarians that this kind of subjunctive occurs in reported speech, signalling that the speaker is not certain of the truth of what he/she is saying. This, however, should not restrict its occurrence to the object position. Notice also that this property must be regarded as language-specific, since other languages do not have it:

- (34) a. *Ha detto che sia venuta.
 b. *Il a dit qu'elle soit venue.
 c. *He said that she have come.

Apart from the semantic connotations of subjunctive 1, we can hypothesize that a certain class of verbs in German select this subjunctive in their internal argument. Since this is impossible when *es* is present, we can conclude that the clause in construction with *es* does not act as a complement of the verb.

Notice, incidentally, that the same is true for the passive counterpart of (27) and (31):

- (35) a. Gestern wurde (*es) gesagt, sie ist/ sei krank.
 b. Gesagt wurde (*es), sie ist/ sei krank.
 c. Vom Arzt wurde (*es) gewünscht, der Patient solle das Bett hüten.

by-the doctor was it desired the patient should the bed keep
(Pütz 1975:80)

(36) Gestern wurde (?*es) gesagt, daß sie krank sei.

This shows again that a theory which regards *es* in the passive sentences as a subject expletive would fail to explain the observed regularities. There would be no reason why the presence or absence of a subject expletive should correlate with the syntactic form of the clausal complement.

Third, the embedded clause is not an extraction domain when *es* is present, both in the active and passive case, and with an ergative verb. As we see in (37)-(39), extraction becomes impossible if *es* is inserted:

(37) a. *Wer* wurde (*es) gesagt, sei *t* gestern gekommen?
who was it said is yesterday come

b. *Wen* wurde (*es) gesagt, habe Hans *t* getroffen?
whom was it said has H. met

c. *Wie* wurde (*es) gesagt, habe Hans seinen Bruder *t* beleidigt?
how was it said has H. his brother offended

(38) a. *Wer* hat Hans (*es) gesagt, sei *t* gestern gekommen?
who has H. it said is yesterday come

b. *Wen* hat Hans (*es) gesagt, habe er gestern *t* getroffen?
whom has H. it said has he yesterday met

c. *Wie* hat Hans (*es) gesagt, habe er seinen Bruder *t* beleidigt?
how has H. it said has he his brother offended

(39) a. *Wen* ist dem Hans gelungen *t* zu besiegen?
whom was to-the H. successful to beat
(Grewendorf 1986:95)

b. **Wen* ist es dem Hans gelungen *t* zu besiegen?

c. *Was* steht (*es) fest, werden wir *t* kaufen?
what is it fixed will we buy

However, one could object that these sentences are independently excluded since a V/2 complement is not allowed in the presence of *es* (see (27)-(28),

(35) above). The extraction possibilities should be tested in those southern dialects of German where *wh*-movement out of a *daß*-clause is allowed. Here too extraction becomes impossible if *es* is inserted. We obtain the same judgments for active and passive clauses and ergative verbs:

- (40) a. *Wer* sagte (*es) Hans, daß *t* gestern gekommen ist?
 b. *Wen* sagte (*es) Hans, daß er *t* getroffen hat?
 c. *Wie* sagte (*es) Hans, daß er seinen Bruder *t* beleidigt hatte?
- (41) a. *Wer* wurde (*es) gesagt, daß *t* gestern gekommen ist?
 b. *Wen* wurde (*es) gesagt, daß Hans *t* getroffen hat?
 c. *Wie* wurde (*es) gesagt, daß Hans seinen Bruder *t* beleidigt hat?
- (42) *Was* steht (*es) fest, daß wir *t* nicht kaufen werden?

Once again, a theory which treats *es* in the passive case as an expletive subject would fail to explain the parallel behavior of active and passive clauses and to give a natural account of why the expletive subject should block extraction out of the clausal complement. In a *Barriers* framework (Chomsky 1986b), this follows if *es* is assigned the object θ -role by the verb, so that the embedded clause does not receive any θ -role directly. Being a non-L-marked category, it functions as a barrier for proper government of the intermediate trace in specC'. (Notice that successive cyclic movement is forced in German by a revised version of the connectedness condition of Kayne 1984, as proposed by Bennis 1986 for Dutch).

The cases in (37)-(42) parallel the ungrammaticality of (43), where a *wh*-element is extracted out of an extraposed clause connected with the argument *da* in the PP:

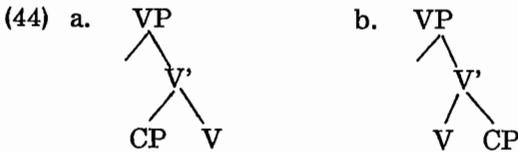
- (43) **Wen* hast du damit gerechnet, daß er *t* einladen würde?
 whom have you thereon counted that he invite would

The empirical evidence we have discussed above leads us to the conclusion that the clause does not behave as an argument of the verb when it cooccurs with *es*, as expected if it is *es* that counts as the internal argument of the verb. Instead, when no anticipatory pronoun is present, the clause itself behaves as the argument of the verb. In the next section, we will investigate where the clause is located in the two cases.

3.4. On the position of the embedded clause

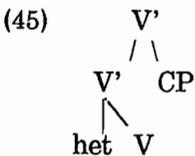
The behavior of the embedded clause differs depending on whether *es* is present or not (see 3.3.). The clause acts as the complement of the verb only

when *es* is not present. It seems adequate not to assume any empty category in object position in the absence of *es*. The clause itself will be generated in object position, either to the left (44a) or to the right of the verb (44b). We will leave open the question whether (44a) or (44b), as suggested by Bennis (1986:105) for Dutch, is the structure for sentential internal arguments. If (44a) is the correct one, an extraposition rule that moves the clause beyond the finite verb must be assumed:

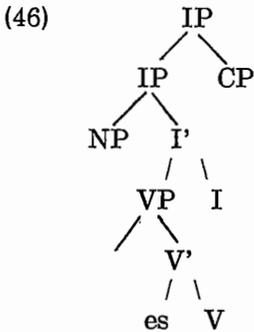


Notice that this solves the problem that was mentioned at the beginning of the present discussion with regard to (1b): if there is no empty category in construction with the clause, there is no alternation of *es/pro* in this case, which supports our hypothesis that *es*, which is an argument, cannot occur in the same contexts as *pro*, which is a non-argument.

If *es*, when present, is indeed the complement of the verb to which a θ -role is assigned, the clause must occur in an adjoined position. This means that no rule of extraposition takes place in this case, but the clause is generated in an "extraposed" position. Bennis (1986:105) proposes the following structure for the corresponding Dutch sentences:



However, it seems that this is not the right structure for the case of an embedded clause cooccurring with *es*. Instead, it must be suggested that the clause is not embedded under VP, but occurs in an extraposed position, either adjoined to VP or to IP. There is evidence that the clause is generated outside the VP, probably adjoined to IP, as shown by structure (46):



If the clause were under VP or adjoined to VP, we would predict that *es* cooccurs with the clause in the *Mittelfeld*. This S-structure order would be obtained through the movement of the verb to I° . Sentences (47) illustrate the point:

(47) a. *daß ich es, daß er gekommen ist, behauptet habe.
that I it that he come is asserted have

b. *daß es nun, daß er gekommen ist, behauptet wurde.

The ungrammaticality of these sentences shows, however, that the embedded clause is generated in a higher position.

The test of VP-preposing supports this conclusion. Since the clause does not move along with the VP, it is not adjoined to VP, but generated in a higher position: ⁽⁸⁾

(48) *Es BEHAUPTET, daß ich kommen will, habe ich nicht.
it asserted that I come wanted have I not

In German, it is never possible to extract out of an extraposed adjunct clause. It follows that extraction facts cannot be relevant for the present discussion. Sentences (49) are ungrammatical, (50) is expected to be, too (see also (40)-(42) above):

(49) a. *Wen bist du weggefahren, ohne *t* zu begrüßen?
whom are you gone-away without to greet

b. *Mit wem hast du deine Entscheidung getroffen, ohne *t* zu sprechen?
with whom have you your decision taken without to speak

- (50) **Wen* glaubst du es, daß er *t* einladen wird?
whom believes you it that he invite will

In English, however, since it is marginally possible to extract out of an adjunct clause, extraction can provide us with evidence for the position of the extraposed clause in the corresponding *it*-construction of (51). Whereas (52) is marginally acceptable, (53) is totally ungrammatical:

- (51) I couldn't believe it that John had visited Mary.
(52) ?? *Who* did you leave before meeting *t*?
(53) * *Who* couldn't you believe it that John had visited *t*?

This suggests that the embedded clause in (51) does not occupy the CP position in the structure (45) proposed by Bennis (1986), but a position outside VP. Notice also that in a structure like (51), the complementizer *that* cannot be deleted, while this is possible in the absence of *it*:

- (54) a. *I couldn't believe it she came.
b. I believe she will come.

The ungrammaticality of (54a) follows if the empty complementizer is not properly governed (cf. Stowell 1981).

We can therefore conclude that the embedded clause in construction with *es* is generated in an adjoined position, hence an A'-position, as shown in structure (46).

3.5. Factive verbs

We said that structure (45) is not the correct one for the case of a clause cooccurring with object *es*. However, it seems adequate for the VP projected by a factive verb. In order to construct the evidence, we must first investigate the argument structure of factive verbs.

3.5.1. The complex-NP analysis

First notice that the analysis suggested in Kiparsky and Kiparsky (1970) according to which the complement clause of a factive verb is always embedded under an NP, no matter whether the nominal head is an overt noun, *fact*, or a pronoun, *it*, or is empty, does not seem to be the right

approach for factive complements. German offers interesting evidence that the NP- analysis is available only when the clause cooccurs with *Tatsache*, "fact".

If it were an NP, the embedded clause should appear in the *Mittelfeld*, to the left of the matrix verb. This is possible for all NPs embedding a clause, even for those whose nominal head is empty, as is the case in free relatives (see (56)):

(55) Ich weiß, daß er den Versuch, sie zu besiegen, wiederholen will.
I know that he the attempt her to beat repeat wants

(56) a. Ich weiß, daß er, was er gemacht hat, bereut.
I know that he what he done has repents

b. Es ist nicht wahr, daß ich gestern, was er gemacht hat, erzählt habe.
it is not true that I yesterday what he done has told have

However, the complement clause of *bereuen* patterns with (55)-(56) only when it is embedded under an NP headed by *Tatsache*. When it is bare, the complement clause of *bereuen* patterns with that of a non-factive verb like *erzählen*, which suggests that it is not an NP but a CP:

(57) a. Ich weiß, daß er die Tatsache, daß er seine Frau beleidigt hat, nicht bereut.
I know that he the fact that he his wife offended has not repents

b. ?? Ich weiß, daß er, daß er seine Frau beleidigt hat, nicht bereut/ bereut hat.

c. ?? Ich weiß, daß er, daß er seine Frau beleidigt hat, erzählt hat.

A second piece of evidence is provided in German by those transitive predicates which take two clauses as arguments. When the subject clause occupies the [NP, IP] position and the object clause is topicalised, the sentence is ungrammatical. It can be rescued if the subject clause can be embedded under an NP such as *Tatsache*. This is possible when the clausal subject displays the same semantic properties as the clausal object of a factive verb, i.e. it is presupposed to be true:

- (58) a. *Daß Peter uns böse ist, zeigt, daß er nicht gekommen ist.
 that P. to-us angry is shows that he not come is
 (Pütz 1975:141, fn.23)
- b. *Daß man reich ist, bedingt/ erfordert, einen Führerschein zu erwerben.
 that one rich is involves/ requires a driving licence to obtain
 (Pütz 1975:141, fn.23)
- (59) a. Daß er uns böse ist, zeigt die Tatsache, daß er nicht gekommen ist.
 b. *Daß man reich ist, bedingt/ erfordert die Tatsache, einen Führerschein zu bekommen. (Pütz 1975:141, fn.23)

This shows that the "factive" subject is not embedded under an NP when no lexical nominal head appears, as is the case in (58a). The constraint against subject clauses (cf. Koster 1978) rules out the sentence.

English provides a third piece of evidence that when no lexical head appears, no complex-NP analysis is available. A verb like *like* can take an infinitival clause only if this is bare, and verbs like *like* and *regret* allow gerunds only if unembedded:

- (60) a. I like to go there.
 b. *I like the fact to go there.
- (61) a. I like/ regret doing that.
 b. *I like/ regret the fact of doing that.

It is also possible to show that *es* is not the head of an NP under which the *daß*-clause is embedded. Notice that in *Mittelfeld*-position, strong marginality is also obtained in the presence of *es*: (62) patterns with (57b), not with (57a):

- (62) ?? daß ich es, daß er gekommen ist, bereue/ bereut habe.
 that I it that he come is repent/ repented have

Notice also that *es* does not form a constituent with the clause. It cannot be topicalised with the clause, whereas the NP headed by *Tatsache* can:

- (63) a. *Es, daß er gekommen ist, bedauere ich nicht.
 it that he come is regret I not
- b. Die Tatsache, daß er gekommen ist, bedauere ich nicht.

The ungrammaticality of (63a) cannot be reduced to the fact that an accusative *es* cannot be topicalised in German. The same contrast is in fact also found in the case of a subject clause. Whereas *Tatsache* is possible as the head of the NP, *es* is ungrammatical:

- (64) a. Die Tatsache, daß er mich eingeladen hat, freut mich.
the fact that he me invited has pleases me
- b. *Es, daß er mich eingeladen hat, freut mich.

The ungrammaticality of (64b) suggests that something more general is at stake here. Notice that the same contrasts are also found in English. Whereas a clause embedded under *fact* can be topicalised, this is not true when the clause is adjacent to *it*. (65) illustrates the case of an object clause, (66) the case of a subject clause.⁽⁹⁾

- (65) a. The fact that he is not right, he'll never admit.
b. *It that he is not right, he'll never admit.
- (66) a. The fact that he is not right troubles him.
b. *It that he is not right troubles him.

These facts show that in English, too, the clause does not form a constituent with the pronoun *it*, which means that *it* does not head an NP under which the clause is embedded. This follows from the general property of pronouns like *es* and *it*, which are not heads but maximal projections.

Extraction facts are not relevant for the present discussion since extraction out of the *daß*-clause embedded under a factive verb is never possible in German, whether *es* is present or not:

- (67) a. *Wen bereust du, daß du *t* beleidigt hast?
whom repent you that you offended have
- b. *Wen bereust du es, daß du *t* beleidigt hast?

But in English, it is possible to extract an object out of the complement of a factive verb, with a violation of subjacency; on the contrary, the extraction of a subject or of an adjunct leads to a violation of ECP.⁽¹⁰⁾ The presence of *it* worsens the sentences in (68a-d) but does not cause ungrammaticality:

- (68) a. ??Who do you regret (it) that John visited?

- b. ?? Who was it regretted that John visited?
- c. ?? With whom do you regret (it) that he spoke?
- d. ?? With whom was it regretted that he spoke?
- e. * Who do you regret (it) that visited John?
- f. * Who was it regretted that visited John?
- g. * How do you regret (it) that John fixed the car?
- h. * How was it regretted that John fixed the car?

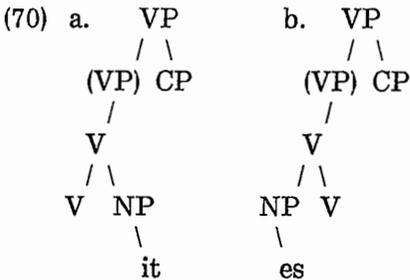
However, whereas (68a-d) are marginal, extraction over an NP is always impossible, no matter whether the head is lexical or empty:

- (69) a. *Who do you regret the fact that John visited?
 b. *What did you meet who wrote?

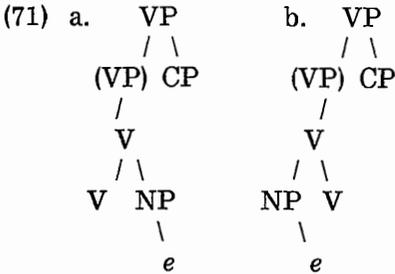
These facts provide evidence that the clause which appears with a factive verb is not embedded under an NP when it occurs alone or when a pronominal is also present.

3.5.2. On the position of the embedded clause

Instead of the complex-NP analysis, a structure like that in (70) can be proposed, where the pronoun occupies the object position and the clause is in a position under VP, possibly an adjoined position as indicated by the VP node in parentheses (a. and b. respectively for English and German):



In the absence of the lexical pronoun, we can suggest that the clause occupies the same position as in (70). An empty NP appears in object position, i.e. an empty category which is head-governed by the verb and antecedent governed by the clause under VP: ⁽¹¹⁾



If the embedded clause does not occupy the position sister of the verb, it is expected that it is not possible to extract a *wh*-element out of the clause embedded under a factive verb in German (see (67)). This is also not even marginally possible, since in German long extraction is always ungrammatical, as shown by the impossibility of extraction out of an extraposed adjunct clause (see (49)). In English, where this possibility marginally holds for objects (see (52)), *wh*-extraction of an object out of the clause embedded under a factive verb is also marginally acceptable (see (68a-d)). Since this property is not dependent on the presence of *it*, structure (71a) is justified. The non-complement status of the clause which occurs with a factive verb also explains why in German it cannot be a verb-second clause and cannot contain a subjunctive verb:

(72) *weil Peter (es) bereut, er ist nicht da gewesen.
 because P. it repents he is not there been

(73) a. *Er bedauert/ würde (es) bedauern, daß er sie beleidigt habe.
 he regrets/ would it regret that he her offended has-SUBJ

b. *daß (es) bedauert wird/ würde, daß er sie beleidigt habe.

Since these properties do not depend here on the presence of *es* (see 3.3. above), the assumption of an empty category when *es* is not present is justified.

3.5.3. Some differences between factive and non-factive verbs

Let us now consider some differences between the case of a factive verb and that of a non-factive verb, which support our suggestion that a structure like that in (45), proposed by Bennis (1986), can only be correct for the VP projected by a factive verb. First, while (47a), repeated here as

(74b), is ungrammatical, (62), repeated here as (74a), is marginally acceptable: *es* can cooccur with the embedded clause in the *Mittelfeld*:

- (74) a. ?? daß ich es, daß er gekommen ist, bereut habe.
 b. * daß ich es, daß er gekommen ist, behauptet habe.

It is possible to apply the test of VP-preposing in order to verify whether the clause moves along with the VP and is therefore adjoined to VP. We saw that (48), repeated here as (75a), is completely ungrammatical. It contrasts with (75b), which is acceptable (the marginality of (75b) is probably due to the fact that *es* is independently marginal in the *Vorfeld*, as (75c) confirms). The contrast between (75a) and (75b) gives support to structure (70) for a factive verb and shows that the clause embedded under a non-factive verb must occupy a different position:

- (75) a. * [Es BEHAUPTET, daß ich kommen will] habe ich nicht.
 b. ?? [Es BEDAUERT, daß ich gekommen bin] habe ich nicht.
 c. ?? [Es GELESEN] habe ich nicht.

If we apply the test of *wh*-extraction in English, we obtain different results (see (53) and (68a-d)), which can represent evidence that the embedded clause occupies the position of CP in (70) only in the case of a factive verb, whereas it occurs in a really extraposed position with non-factive verbs, as shown in (46).

Whether the different structural position correlates with the different semantics of the clause occurring with factive and non-factive verbs is an interesting topic of inquiry: In the former case, the clause is presupposed and represents old information, in the latter it is new information, anticipated by a cataphoric pronoun.

3.6. On the relationship between "es" and the clause

We have shown that *es* behaves as the argument of the verb when it cooccurs with a clause, whereas the clause behaves like an adjunct and occurs in an adjoined position. The principle of Full Interpretation of Chomsky (1986a) requires that all elements occurring at LF must be licensed by an interpretation. An adjoined position containing a clause can only be licensed at LF by being linked to an argument position.

In order for the embedded CP in (46) to get an interpretation, it must be construed with *es*. The most obvious assumption is that the two elements form a CHAIN, as shown in (76):

(76) $C = (CP, es)$

The two links of the CHAIN meet the condition that the first *c*-commands the next (cf. Chomsky 1986a). In (76), CP *c*-commands *es*. However, the chain conditions (77) of Chomsky (1986a:137), formulated for a sentence like (78):

(77) If $C = (a_1, \dots, a_n)$ is a maximal CHAIN, then a_n occupies its unique θ -position and a_1 its unique Case-marked position.

(78) It is believed that John is intelligent.

do not seem adequate for the CHAIN represented in (76). In (76), the head of the CHAIN, i.e. the position occupied by the clause is not a Case position. Instead, Case is assigned to the foot of the CHAIN in an active clause, whereas in a passive clause, it is assigned to the head of the chain formed by the raised *es* and its trace. In order to allow for CHAINs like the one in (76), a partial reformulation of chain theory seems necessary. We will not attempt this here. We want however to discuss some related questions.

What we have to maintain is a definition of the θ -criterion which imposes a one-to-one relation between θ -roles and arguments. As we saw, this requirement is fulfilled by the CHAIN in (76): the pronoun counts as the argument of the verb, while the clause behaves syntactically as an adjunct. However, it can be shown that the clause meets the subcategorization requirements of the verb. It can occur only if the verb selects a propositional θ -role. If the verb does not, the clause cannot be construed with *es*:

(79) *Ich beachte es nicht, krank zu sein. (Pütz 1975:fn.12)
I mind it not sick to be

The CHAIN as a whole must count as the argument of the verb, where *es* represents in some sense the structural argument of the verb, being projected into the argument position, and the clause represents its semantic/ thematic argument. A D-structure CHAIN can be thought of as the representation of a discontinuous argument of the verb. A similarity can be stated with the case of an A-chain, where the raised NP counts simultaneously as the syntactic external argument and the thematic internal argument of the verb.

Independent principles of the grammar rule out ill-formed chains. Given the one-to-one correspondence between θ -roles and arguments, a CHAIN

consisting only of the clause cannot be formed, since it does not occupy a θ -position, nor is it linked to a θ -position.

An interesting fact can be observed. Whereas it is possible to construct a CHAIN like (76), the reverse linear order is ungrammatical, as shown by (80) (see (12) and (13) above):

(80) *Daß der Franz den Josef so bewundert, glaube ich es nicht.

This difference must be due to an asymmetry between the left and the right side of the sentence. Whereas the left side consists of an operator position, the specC' position, which can only be construed with an empty category, this is not the case for the right side of the sentence. A right peripheral clause, not being in an operator position, can be linked to a lexical pronoun like *es*.

Still another question must be answered: Why is it possible for *es* to form chain with an extraposed clause, but impossible that it be construed with an NP?

- (81) a. Ich glaube es nicht, daß er dies behauptet hat.
I believe it not that he that asserted has
- b. *Ich glaube es nicht, seine Behauptung.
I believe it not his assertion

Since both CP and NP can be the canonical structural realization of a propositional θ -role, no problem arises as far as θ -theory is concerned. Furthermore, the CHAIN contains one Case-position in both cases and is therefore "visible" for θ -role assignment at LF. However, NPs and clauses are crucially different in that the requirement of association with a Case feature holds only for the former. In (81b), two NPs compete for the same Case feature, which clearly violates the biunique relation between Case features and nominals.

3.7. External-argument "es"

In 3.2. and 3.3., we have discussed evidence that the *es* which occurs with a passive and an ergative verb is not an expletive but an argument, essentially the same element that occurs in object position with an active verb. Let us now consider the case in which *es* is in construction with a clause that bears the external θ -role of the verb. We would like to claim that *es*, occupying a θ -position, is not an expletive but the real argument of the

verb, and bears the relevant θ -role. Since German does not allow an argumental null pronominal (see 1.2.2.), our analysis predicts that *es* is obligatory with a transitive verb:

- (82) daß * (es) deine Vorhersagen beweist, daß er den Hans eingeladen hat.
that it your predictions proves that he the H. invited has

That the clause occurs in an extraposed position is shown by the fact that, even for those southern speakers of German who can *wh*-move from a *daß*-clause, it is impossible to extract out of it:

- (83) a. **Wen* hat es den Mann beleidigt, daß du *t* liebst?
who has it the man offended that you love
b. **Wen* beweist es deine Vorhersagen, daß er *t* eingeladen hat?

Our analysis seems to be confirmed when *es* is an external argument.

There are however some problematic cases. They concern psych verbs and the raising verb *scheinen*, with which *es* can be marginally left out:

- (84) a. daß ??(es) ihn überrascht, daß er angerufen hat.
that it him surprises that he phoned has
b. daß ?(es) mir scheint, daß er angerufen hat.
that it to-me seems that he phoned has
c. daß ??(es) scheint, daß er angerufen hat.

Let us begin with the discussion of (84a). As above, *es* should be considered an argument when present. Given the fact that an argumental null subject is not allowed in German, specI' cannot be occupied by an argumental *pro* when *es* is not present. Instead, the subject position is occupied by an expletive *pro*. If *es* were an external argument in (84a), we would expect this possibility not to hold and *es* to be obligatory as in (82). That it is not can be ascribed to the fact that verbs like *überraschen* are psych verbs apparently of the same class as Italian *preoccupare* (cf. Belletti and Rizzi 1988), and so the clausal complement is generated in a V'-internal position (see den Besten 1985 for empirical evidence). Sentences like (84a) result from direct extraposition from this position to an IP-adjoined position, presumably a marked operation. Hence the marginality of the absence of *es* (cf. Safir 1985 and Tomaselli 1986 for different analyses). The

markedness of this operation explains why the theme of psych verbs is not an internal argument in every respect. First, notice that the clausal argument cannot be a V/2 clause (see 3.3.):

- (85) *Gestern hat es mich überrascht, er hat angerufen.
yesterday has it me surprised he has phoned

Second, extraction in the presence of *es* is neither as bad as with object *es* (see (40)-(42)) nor as bad as with subject *es* (see (83)): ⁽¹²⁾

- (86) ?Wen stört es dich, daß die Franka *t* liebt?
who disturbs it you that the F. loves

The theme argument of psych verbs has in some sense an intermediate status between internal and external argument, for which we have no explanation to offer.

The case of the verb *scheinen* is also problematic. From the possibility of cliticizing *es* to a preceding dative NP (see (17)) and of having a V/2 clause in the complement position (see (27)-(28)), we deduce that *es* and the clause, respectively, are an internal argument of the verb:

- (87) a. daß mir's scheint, daß er angerufen hat.
that to-me it seems that he phoned has
b. Mir scheint, er ist krank.

If the clause in (87a) is in an adjoined position, we expect extraction out of it to be impossible. This is indeed what we find:

- (88) *Wen scheint dir's, daß Hans *t* beleidigt hat?
who seems to-you it that H. offended has

However, contrary to expectation, the presence of *es* does not cause ungrammaticality in (89). It also seems that *es* improves the sentence in (89b,c):

- (89) a. Wen scheint (es) dir, daß Hans *t* beleidigt hat?
b. Wen scheint ??(es), hat Hans *t* beleidigt?
c. Wen scheint ?(es), daß Hans *t* beleidigt hat?

In (89), the clause must be in complement position, since it is an extraction domain, whereas *es* seems to occur in subject position. We have no

explanation for this fact.

We think, however, that raising verbs, as well as psych verbs, are still poorly understood and that a better understanding of their argument structure can also help to account for the problematic facts we have presented in this section.

3.8. Conclusions

In this Chapter, we have shown that *es* cannot be analysed as an expletive when it cooccurs with an embedded clause. We have provided empirical evidence that it behaves in fact like an argumental *es*, whereas the clause shows syntactic effects typical of an adjunct. This state of affairs is predicted by the analysis outlined in Chapter 1, according to which the pronoun *es* occurring in an A-position is always an argument.

We have also shown that the optionality found sometimes with an *es* cooccurring with a clause is only apparent. When *es* does not appear, no empty category occurs instead, but the clause itself behaves as the argument of the verb.

A distinction must be made between the clause embedded under a factive verb and the one embedded under a non-factive verb. We have tried to account for this distinction suggesting that the clause is generated in different positions in the two cases. However, this issue deserves further investigation, as well as the status of the empty category occupying the internal argument position in the structure we have proposed for factive verbs (see (71)). A partial reformulation of chain theory is also necessary, in order to account for the relationship between *es* and the embedded clause. We also hope that some apparent counterexamples to our analysis, which concern the *es* occurring with psych verbs and the raising verb *scheinen*, will be better analysed after a deeper understanding of the argument structure of these verbs.

Notes to Chapter three

1. An object pronoun anticipating an extraposed clause is possible in German, Dutch, English and other Germanic languages, but excluded in Italian and French, and probably in all Romance languages:

- (i) *Lo rimpiango che Mario non sia venuto.
it regret that M. not is come
- (ii) *Je le regrette/ regrette ce que Marie ne vienne pas.

I it regret/ regret this that M. not comes

2. Grange (1987:51) suggests the same analysis for a sentence like (i):

- (i) ? daß es angenommen wurde, daß ...
that it assumed was that

3. Other occurrences of *es* can be excluded on pragmatic grounds, which however we will not discuss further here. See the following dialogue from Ulvestad and Bergenholtz (1979):

- (i) Speaker A: Was haben Sie eben gesagt?
what have you just said

Speaker B: *Ich habe es gesagt, daß Lene vermutlich krank ist.
I have it said that L. probably sick is

4. It is not possible to exclude (13) on the basis of the fact that there must be a trace in subject position, so that no expletive *es* can also occur. In German, NP-movement is not obligatory in passives. See Grewendorf (1986) and (1988) for evidence.

5. The *es* occurring with verbs such as *heißen* and *darauf anlegen* does not pattern with the *es* in chain with an extraposed clause. For example, as noted by Pütz (1975:18), it can cooccur with a topicalised clause:

- (i) Franz Josef sei gar nicht so schlimm, heißt es immer wieder.
F. J. is not so bad says it always again
- (ii) Daß alle in ihm den guten Onkel sehen, darauf legt er es an.
that everybody in him the good uncle see at-that aims he

In (i) and (ii), *es* is more an idiomatic *es*, like the one discussed in 1.1.2.2., respectively in subject and object position. The embedded clause in sentences like:

- (iii) Es heißt, daß Italiener viele Spaghetti essen.
it says that Italians much spaghetti eat

is in the complement position of the verb and not in an extraposed position, as shown by the possibility of being a verb-second clause and of allowing *wh*-extraction (see 3.3.):

- (iv) Es heißt, Italiener essen viele Spaghetti.
- (v) a. *Wer* heißt es, habe *t* die Miete nicht bezahlt?
who says it has the rent not paid
- b. *Was* heißt es, habe Paul *t* noch nicht bezahlt?
what says it has P. not yet paid
- c. *Wie* heißt es, habe Paul ihn *t* getötet?
how says it has P. him killed

See Olsen (1981) and Haider (1987) for recent discussion.

6. In order for the cliticized pronoun 's to get nominative Case in passive clauses, the cluster *ihm*'s must scramble to the position of clitic pronouns, probably a TP-adjoined position. If this position is accessible to nominative Case, Agr^o and not C^o is the nominative Case assigner in German.

7. *Das* is also usually possible in a Left-Dislocation structure (see Cardinaletti 1987). See (i), which contrasts with the ungrammatical (12a) in the text above:

- (i) *Daß der Franz den Josef so bewundert, das wundert manchen.*
that the F. the J. so admires that surprises some

Grange and Haegeman (1987) report that in West Flemish a quasi-argument can also be substituted by *das*. This is not possible in German:

- (ii) **Das regnet.*
that rains

8. The passive case cannot be tested, since a nominative pronoun cannot remain inside the VP for Case-theoretical reasons.

9. Thanks to Jacqueline Guéron for providing sentences (65).

10. In Italian, since extraction takes place from the postverbal subject position (see Rizzi 1982), *wh*-movement of a subject is also marginally possible:

- (i) (??) *Che cosa rimpiangi che Maria non ha detto t?*
what (you) regret that M. not has said
- (ii) (??) *Chi rimpiangi che non sia venuto t?*
who (you) regret that not is come
- (iii) * *Come/ *In che modo rimpiangi che ti sei comportato t?*
how/ in which way (you) regret that (you) yourself are behaved

For the discussion of extraction possibilities with factive verbs in Italian, Spanish, French and Portuguese, see Longobardi (1988), Jaeggli (1982:167f), Zubizarreta (1982/83) and the references cited there.

11. The linear order "(*es* +) CP + V" shown in (57b) and (62) is obtained through raising of the verb to I^o. If the analysis is correct, these facts could be used as empirical evidence for the generalized movement of the verb to I^o in German, both in finite and infinitival clauses (see Giusti 1986 for the proposal that the verb raises to I^o in infinitival clauses). Since the past participle also appears to the right of the embedded clause, adjacent to the finite verb, it is possible to hypothesize that it is also raised to I^o, as empirically motivated by the fact that no lexical material can intervene between the elements of a verbal cluster. Notice that the same possibility holds in Italian, as discussed by Belletti (1988b). Alternatively, one could suggest that the past participle morpheme projects its own phrase TP, to whose head the verb is raised, giving the observed linear order.

12. Extraction from the theme argument of psych verbs in Italian is also marginal:

- (i) a. ??il ragazzo *di cui* ci preoccupa la sorella *t*
 the boy of whom us-worries the sister
- b. ??il diplomatico *di cui* mi impaurisce la segretaria *t*
 the diplomat of whom me-frightens the secretary
- (ii) a. * Ce ne preoccupa la sorella.
 b. * Me ne impaurisce la segretaria.

The clausal argument of psych verbs seems to be a weak island like that of factive verbs (cf. fn. 10):

- (iii) a. ? *Chi* ti preoccupa che Gianni abbia incontrato *t*?
 whom you-worries that G. has met
- b. ??*Chi* ti preoccupa che non abbia telefonato *t*?
 who you-worries that not has phoned
- c. * *Come* ti preoccupa che Gianni si sia comportato *t*?
 how you-worries that G. himself is behaved

CHAPTER FOUR
IMPERSONAL PSYCH VERBS AND
QUASI-ARGUMENTAL *PRO*

4.1. Introduction

A quasi-argumental θ -role is expressed in German by a lexical element and cannot be borne by an empty pronominal *pro* (see 1.1.2.1.):

- (1) daß es/ **pro* regnet.
that it rains
- (2) daß es/ **pro* friert.
that it is-cold

With psych verbs like those in (3)-(4), however, a quasi-argumental *es* can optionally drop, suggesting that a quasi-argumental null pronominal is available in German. In fact, the variant without *es* is the preferred one:

- (3) a. ?daß es mich friert/ dürstet.
"that I am cold/ thirsty"
b. ?daß es mir schwindelt.
"that I feel giddy"
c. ?daß es mir davor graut.
"that I am afraid of it"
- (4) a. daß mich friert/ dürstet.
b. daß mir schwindelt.
c. daß mir davor graut.

After providing evidence for the argumental status of *es* in (3) and for the existence of a quasi-argumental *pro* in German, we will discuss why *es* and *pro* are not in complementary distribution in (3)-(4) as is the case in (1)-(2) and all the constructions we have discussed in the previous chapters. (3) and (4) represent instead the only case of real optionality of *es* in German. We will also address the question of how such an empty category is licensed, in particular in a semi *pro*-drop language like German. The empirical facts provided by this class of psych verbs will turn out to be particularly

interesting in that they suggest a possible way of defining a theory of quasi-argumental *pro*. The crucial fact that distinguishes the psych verbs in (3)-(4) from the verbs which take quasi-arguments in (1)-(2) is the selection of an additional argument bearing the θ -role "experiencer".

4.2. On the argument structure of impersonal psych verbs

As will become clear in the next sections, two classes of impersonal psych verbs must be distinguished. The crucial difference lies in the fact that verbs like *grauen* and *grausen* always select two arguments, a quasi-argument and an experiencer, whereas verbs like *frieren* and *dürsten* can be both biargumental and monoargumental, only subcategorizing an experiencer argument in the latter case.

Each phenomenon we will discuss will be illustrated for both classes of impersonal psych verbs. We will see that to some extent, the possibility of different lexical entries influences the occurrence of lexical and null quasi-arguments.

4.2.1. "Es" as an internal argument: synchronic and diachronic evidence

Let us begin with the discussion of (3), where *es* is realized. Under the analysis developed in Chapter 1, according to which no lexical expletive (in A-position) is possible in German, we expect that *es* cannot be a non-argument, but must be an argument, here too. Being non-referential, it qualifies as quasi-argument (cf. 1.1.2.1.). The control properties of the sentence corroborate the quasi-argument status of *es* in (3). It cannot occur in an arbitrary control context, (5a), but can control the empty subject of an infinitival adjunct, which in turn can be controlled, (5b-d), suggesting that the psych verbs in (5) select a quasi-argument. Neither possibility holds for non-arguments, (6) (see 1.1.2.1.):

- (5) a. * Es gibt keine Möglichkeit, PRO dich zu frieren.
 "there is no possibility that you are cold"
- b. (?)? weil *es* mich fröstelt, ohne PRO mich zu frieren.
 "because I am cold without freezing"
- c. (?)? weil *es* mich dürstet, ohne PRO mich zu hungern.
 "because I am thirsty without being hungry"

- d. ? weil *es* mir graut, ohne *PRO* mir davor zu grausen.
 "because I am afraid of it without being horrified by it"

- (6) * daß pro gesprochen wird, ohne *PRO* diskutiert zu werden.
 that spoken was without discussed to be

The marginality of (5b-d) is to be attributed not to the control properties of *es*, but to the preference of many speakers to omit *es* with these verbs:

- (7) a. weil ((?)*es*) mich friert.
 b. weil (?*es*) mir davor graut.

We will come back to the marginality of *es* in (7) in 4.3.

Further evidence that the *es* of (3) is not an expletive generated in subject position, but a quasi-argument generated in V'-internal position is provided by the possibility of being cliticized to the preceding dative NP, (8), which holds only for internal arguments in the basic linear order "indirect object - direct object" (see 3.2):

- (8) a. daß ihm's davor graut.
 "that he is afraid of it"
 b. Graut ihm's davor?
 "is he afraid of it?"
 c. ?daß ihm's schwindelt.
 "that he feels giddy"

Diachronic evidence seems to confirm the quasi-argument status of the *es* occurring with impersonal psych verbs. Lenerz (1985) reports that the use of the lexical quasi-argument in sentence-internal position with weather verbs considerably increased in Middle High German. As expected, the use of the lexical pronoun with psych verbs also arose in the same period, whereas non-argumental *es* in sentence-internal position has not developed in the history of German.

The control and the cliticization facts and the diachronic considerations suggest that *es* in (3) is an internal argument generated in object position and then moved to subject position in order to receive (nominative) Case. From the D-structures in (9), we obtain the S-structures in (10):⁽¹⁾

- (9) a. daß [VP mich *es* friert]

- b. daß [mir es schwindelt]
- c. daß [mir es davor graut]

- (10) a. daß *es* mich *t* friert.
 b. daß *es* mir *t* schwindelt.
 c. daß *es* mir *t* davor graut.

4.2.2. Internal arguments and auxiliary selection

In 4.2.1., we reached the conclusion that the quasi-argument of psych verbs is projected V'-internally.

Internal quasi-arguments are also found with weather verbs in Italian, where they correlate with the selection of the auxiliary *essere* instead of *avere* (see Burzio 1986:Ch.2, fn.15). The S-structures projected from the two lexical entries for *piovvere* are given in (11):

- (11) a. Ieri *pro* ha [VP *t* piovuto]
 yesterday (it) has rained
- b. Ieri *pro* è [VP piovuto *t*]

In spite of the fact that they do not have an external argument, German impersonal psych verbs take the auxiliary *haben*:

- (12) Es hat mich gefroren.
 it has me been-cold

Following Belletti and Rizzi (1988), we claim that these verbs select *haben* because they assign (inherent) accusative Case to the additional experiencer argument (see their work for a reinterpretation of Burzio's generalization following on from this proposal). So, the selection of *haben* is independent from the internal status of the quasi-argument.

Since those psych verbs which take a dative experiencer, like *grauen*, also have the same auxiliary (*mir hat es davor gegraut*, "I was afraid of it"), it is possible to regard the morphological dative and accusative as the realization of a same inherent abstract Case, probably accusative. This is also supported by the fact that some of the verbs that select a dative experiencer can also marginally assign accusative to it:

- (13) a. Mir/ ?Mich graut/ graust vor der Prüfung.
 "I am afraid of the examination"

- b. Mir/ ?Mich schwindelt.
 "I feel giddy"

Crosslinguistic support is provided by Italian. Belletti and Rizzi (1988:fn. 27) report from Benincà (1986) the sentence in (14), where a dative and an inherent accusative are treated on a par with respect to the Case Consistency Condition on A'-chains (cf. Cinque 1984):⁽²⁾

- (14) A Giorgio, questi argomenti non l'hanno convinto.
 to G. these arguments not him-have convinced

4.2.3. Quasi-argumental "pro"

Let us now turn to sentences (4), where *es* is not present. Two possible analyses for (4) come to mind. We can either suppose that the sentence is projected from the same lexical entry as (3), the quasi-argumental θ -role being realized by an empty category (cf. also Sternefeld 1985, Bayer 1983/84:fn. 50), or that we have a different lexical representation, i.e. a monoargumental psych verb without a quasi-argument. The two D-structures are given in (15):

- (15) a. daß [VP mich friert]. / daß [VP mir pro schwindelt].
 b. daß [VP mich friert]. / daß [VP mir schwindelt].

We will see that both analyses are indeed associated to sentences like (4a,b), whereas only (15a) is available for the class of psych verbs containing *grauen*, (4c).

Again, we test the control properties of the two constructions. We will first illustrate (15a):

- (16) a. ?weil mich fröstelt, ohne mich zu frieren.
 b. ?weil mich dürestet, ohne mich zu hungern.
 (17) weil mir davor graut, ohne mir davor zu grausen.

In (16) and (17), the possible controller of the subject of the infinitive can only be an empty pronominal *pro*:

- (18) weil *pro* mich fröstelt, ohne *PRO* mich zu frieren.
 (19) weil *pro* mir davor graut, ohne *PRO* mir davor zu grausen.

If *pro* is able to control, it is a quasi-argument. However, it is generally assumed that such an empty category is not licensed in German. If the judgments given in (16) and (17) are correct, we are compelled to assume such a category in German, even if it seems sometimes to occur marginally (see the contrast between (16) and (22)). A possible explanation for the occurrence of this unexpected empty category in German is postponed to 4.5.

Note, incidentally, that the argumental status of *pro* in (15a) strengthens the hypothesis that *es* in (3) is an argument, and also supports our analysis that there is no lexical expletive *es* (in A-position) in German (see Chapter 1). Notice, also, that like the lexical pronoun *es* with which it alternates, *pro* in (15a) is an internal argument. A quasi-argument *pro* is possible in fact only as an internal argument. With an adjectival predicate such as *kalt* in (20), which takes an external argument⁽³⁾ and an internal argument bearing the θ -role "experiencer", a control structure with a quasi-argument *pro* is ungrammatical, (21):⁽⁴⁾

- (20) a. weil (?es) mir kalt ist./ weil's mir kalt ist.
 "because I am cold"
 b. ?weil *es* mir kalt ist, ohne *PRO* wirklich kalt zu sein.
 "because I am cold without (it) being really cold"
 (21) *weil *pro* mir kalt ist, ohne *PRO* wirklich kalt zu sein.
 (cf.: weil mir kalt ist, ohne daß es wirklich kalt ist.)

4.2.4. Monoargumental psych verbs

We turn now to D-structure (15b). Testing the control properties of the sentence, we get (22):

- (22) a. weil mich fröstelt, ohne zu frieren.
 b. weil mich dürstet, ohne zu hungern.

In (22), the subject of the infinitive adjunct is controlled by the experiencer *mich* of the matrix clause, and no other argument of the verb is present

(see 4.2.5. below for the possibility that the experiencer argument of the verb in the adjunct is projected as external):

(23) weil *mich* fröstelt, ohne *PRO* zu frieren.

Whereas possibility (15a) holds for all impersonal psych verbs, for some of them (15b) is not available. The experiencer of a verb such as *grauen* cannot control the subject of an infinitive (cf. the grammaticality of (23)):

(24) * weil *mir* davor graut, ohne *PRO* unwohl zu sein.
"because I am afraid of it without feeling bad"

With this class of verbs, the only grammatical sentence is that of (17), where the quasi-argument *pro* appears in the matrix clause and controls the quasi-argument *PRO* in the adjunct clause.

4.2.5. Externalization of the experiencer argument

Those verbs which can subcategorize only for an internal argument bearing the θ -role "experiencer", i.e. *frieren* but not *grausen* (see construction (15b) and 4.2.4.), can also select the experiencer as "external". These monoargumental psych predicates are therefore to be associated simultaneously to the *piacere*-class (which has an oblique experiencer) and the *temere*-class (with a nominative experiencer) (see Belletti and Rizzi 1988):

(25) a. *daß mir davor graust./ *daß ich davor grause. ⁽⁵⁾
b. *daß mir davor graut./ *daß ich davor graue.
c. *daß mir davor bangt./ *daß ich davor bange.

(26) a. daß mich friert./ daß ich friere.
b. daß mich hungert./ daß ich hungere.
c. daß mir schwindelt./ daß ich schwindele.
d. daß mir unwohl ist./ daß ich unwohl bin.
etc.

When the experiencer argument is externalized, a sentence like (27) is obtained, corresponding to (22a) without externalization:

(27) weil *ich* fröstele, ohne *PRO* zu frieren.

On the other hand, the experiencer of a verb like *grauen* cannot be externalized: it cannot appear in the nominative (see (25) above) nor can it appear as the empty subject of an infinitive, (28):⁽⁶⁾

- (28) *weil *mir* unwohl ist, ohne *PRO* davor zu grauen.
 "because I feel bad without being afraid of it"

Note that from a biargumental lexical entry like that underlying (9) and (15a), no externalization of the experiencer can produce a grammatical sentence:

- (29) a. *daß ich es/ pro friere.
 b. *daß ich es/ pro grause.

The presence of the quasi-argument in (29) is forced by the projection principle which requires each argument in the θ -grid of a verb to be projected into syntactic structure. We can exclude (29) by making reference to Case theory. If the psych verbs in (29) assigned structural accusative, the sentences should be grammatical since quasi-arguments are compatible with accusative Case in German. See the ECM-structure in (30):⁽⁷⁾

- (30) Ich finde es warm heute.
 I believe it warm today

A possibility would be to say that in fact these verbs, although they select an external argument, do not assign structural Case. These verbs correspond therefore to Italian psych verbs like *gioire*, which also do not assign accusative, and differentiate from other verbs belonging to the same class like *temere*, which instead assign accusative:

- (31) a. Gioisco di questo. / Ne gioisco.
 (I) rejoice of this/ (I) of-it rejoice
 b. Temo questo./ Lo temo.
 (I) fear this/ (I) it-fear

However, no lexical alternation as in (31) is found in German with impersonal psych verbs. We suggest that, being the experiencer externalized from an internal argument position, these verbs retain the incapability of assigning structural accusative Case even after externalization. Hence the ungrammaticality of (29) follows from the failure of Case-assignment to *es/pro*.

4.2.6. Psych verbs and locatives

We said that speakers tend to omit *es* in sentences like (7). Note that in some cases *es* becomes impossible or leads to strong marginality if a locative PP is added:

- (32) a. */?? weil es mich in Venedig friert.
 b. */?? daß es ihn in Venedig fröstelt, ohne ihn zu frieren.
 c. */?? daß es ihm in Venedig graut.

The locative tends to force a reading in which it is interpreted as being in chain with the subject *es* (see Bennis and Wehrmann 1987 for these chains in Dutch), which is consequently analysed as the external (quasi)-argument of the monoargumental weather verbs *frieren* and *grauen* of (33):

- (33) a. daß es (in Venedig) friert.
 that it in Venice is-cold
 b. daß es (in Venedig) graut.
 that it in Venice becomes-day

If (32) is more easily interpreted as containing an instance of the weather verbs *frieren* and *grauen* than one of the psych verbs *frieren* and *grauen*, the presence of the experiencer produces a violation of the principle of Full Interpretation (Chomsky 1986a). Since an external argument cannot cliticize to a preceding dative NP (see the discussion of (8) above), the sentence improves if *es* cliticizes and can therefore only be interpreted as an internal argument, hence as the internal quasi-argument of the psych verb *grauen*. The locative will count as an adjunct:

- (34) a. ??daß es ihm in Venedig graut.
 b. ? daß ihm's in Venedig graut.

Since the external quasi-argument of (33) cannot be realized by a null pronominal (see 1.1.2.1.):

- (35) a. *daß pro friert./ *daß pro in Venedig friert.
 b. *daß pro graut./ *daß pro in Venedig graut.

the only possible reading for sentences like (36) without *es* is that of the psych verbs *frieren* and *grauen*, with, respectively, an optional and an obligatory internal quasi-argument (cf. (18)-(19) and (23) above):

- (36) a. weil (pro) mich in Venedig friert.
 b. ?daß pro ihn in Venedig fröstelt, ohne ihn zu frieren.
 c. daß ihn in Venedig fröstelt, ohne zu frieren.
 d. weil pro mir in Venedig graut.

To summarize section 4.2.: We have provided evidence that the lexical entry of psych verbs like *frieren* and *grausen* consists of an internal θ -role "experiencer", inherently marked accusative or dative, and of an internal quasi-argument θ -role realized by the lexical pronoun *es* or by the empty pronominal *pro*. Verbs like *frieren* can in addition be monoargumental, the θ -role "experiencer" being projected as an internal argument (marked with inherent accusative or dative) or as an external argument.

4.3. Least Effort and the Avoid Pronoun Principle

In the preceding sections, we have provided evidence that the quasi-argumental θ -role of impersonal psych verbs can also be borne by a null pronominal. A lexical and a null pronoun seem to have the same distribution in this case. This situation is unexpected. As we saw in 1.3, when a non-referential null pronominal is licensed, its lexical counterpart is excluded. This follows from the Avoid Pronoun Principle, which applies to non-referential pronouns without exception. The natural question arises as to why a null and a lexical pronoun seem instead to be both possible with psych verbs.

Notice first that some configurations show that the Avoid Pronoun Principle is in fact operative also with impersonal psych verbs. No optionality of *es* and *pro* is found for example in specC' position:

- (37) a. *Es/ *pro* friert mich.
 b. *Es/ *pro* graut mir davor.

Since the null quasi-argument, like any null subject, cannot end up in specC' (see 1.4.2.), the lexical form appears. (37) therefore contrasts with (7), here repeated as (38), in grammaticality:

- (38) a. weil ((?)*es*) mich friert.
 b. weil (?*es*) mir davor graut.

The lexical pronoun is also grammatical in another configuration. There is a considerable difference in grammaticality between (38) and (39):

- (39) a. weil's mich friert.
 b. weil's mir davor graut.

Since a null pronominal cannot cliticize to C° (cf. Rizzi and Roberts 1988), the Avoid Pronoun Principle will rule in the sentences where the lexical pronoun is cliticized to C° .

(37) and (39) represent therefore the usual case of complementary distribution of null and lexical pronouns. But why is the lexical pronoun marginally ruled in also in the sentence-internal, not cliticized position of (38)?

We would like to answer this question in terms of the Least Effort condition of Chomsky (1988). Notice that the occurrence of a quasi-argumental *pro* with impersonal psych verbs represents a marked option in the grammar of German, this being the only instance of a quasi-argumental *pro* in this language (see 4.5. below). The use of the null pronoun in these configurations means therefore some cost in the grammar of German. On the other hand, the use of the lexical pronoun is also very costly because it seems to violate a principle of UG like the Avoid Pronoun Principle. Since the violation of UG principles is more costly than a marked language-specific option, the preference of the speakers to omit *es* in (38) is expected. If this analysis is correct, the coexistence of the null and lexical pronoun in (38) follows from the different, contrapposed force of two principles, both of which must be assumed in German on the basis of positive evidence.

This kind of approach seems to receive support from the different behavior of the two classes of psych verbs isolated in 4.2. With those verbs like *frieren* that also allow a monoargumental lexical entry, both structures with a lexical and a null quasi-argument seem to be more marginal than the corresponding sentences with verbs belonging to the other class (cf. (7) and (16)-(17)). With the former class of verbs, the problem of choosing between the lexical and the null pronominal can be overridden by the other lexical entry. Hence, where possible, an analysis in terms of the monoargumental entry is preferred over one based on the biargumental lexical entry.

In the next two sections, we will address the question of how quasi-argumental *pro* is licensed.

4.4. The movement of the experiencer to subject position

The movement of an oblique NP into subject position constitutes a possibility of Universal Grammar. ⁽⁸⁾ It is however not obligatory: given

the fact that the NP is inherently Case marked, the movement is not forced by Case reasons. Following Belletti (1988a), we assume that an inherent Case can combine with the structural nominative Case assigned to the subject position, so that no Case clash arises.

In what follows, we will suggest that the experiencer of impersonal psych verbs can move to subject position. This analysis seems to be straightforward for sentences like (15b). We will however claim that the movement of the experiencer to subject position takes also place in (15a). Let us first discuss some evidence for case (15b).

a) First note that no thematic control is involved in (22). The sentence is ungrammatical when *mich* appears in the *Vorfeld* together with the verb, and the subject of the infinitive is not c-commanded by it, hence not controlled:

(40) *[*Mich* gefröstelt] hat gestern, ohne *PRO* zu frieren.

This means that in (22), the experiencer indeed occupies the subject position.

b) The dative experiencer behaves differently from ordinary dative NPs, which do not control and therefore do not occupy the subject position:

(41) **daß dem Hans* zwei Fehler unterlaufen sind, ohne *PRO sich* zu
 ärgern. (Höhle 1978:69f)
 "that two errors escaped Hans without getting angry"

c) The experiencer is very reluctantly topicalised with the verb under VP preposing:

(42) *?[*Mich* gefröstelt] hat gestern nicht.

d) Whereas unstressed accusative and dative personal pronouns cannot appear in the *Vorfeld*, (43), the experiencer of these verbs can, (44), acting like a nominative pronoun, (45):

(43) a. ??*Ihn* habe ich gesehen.
 him have I seen

b. ??*Ihm* habe ich geholfen.
 to-him have I helped

- (44) a. Ihn dürstet./ Ihn scheint zu dürsten.
 b. Ihm schwindelt.
- (45) Er hat mich gesehen.
 he has me seen

Let us suppose that a personal pronoun must move through the subject (specI') position in order to be topicalised. This follows from the clitic status of unstressed pronoun in German, which form A-chains when moved to specC'.⁽⁹⁾ The subject therefore creates a minimality effect on this chain (cf. Rizzi 1987b) which is avoided only if the trace of the moved pronoun itself stays in subject position. It follows from this analysis that only nominative pronouns can be topicalised.⁽¹⁰⁾ The grammaticality of (44) shows that the experiencer behaves like a nominative pronoun with respect to topicalisation, suggesting that it has moved to specC' through the subject position.

It seems that there are good reasons to conclude that the movement of the experiencer to subject position always takes place in sentences like (15b). The S-structure of (15b) will be (46):

- (46) daß *mich* [*t* friert].

However, the movement of the experiencer must be admitted also when there is an additional internal quasi-argument, that is in sentences like (9) and (15a). First notice that the experiencer can be topicalised with the verb only very marginally. Sentences (47) are as ungrammatical as (42):

- (47) a. ??[Mich gefröstelt] hat *(es) gestern nicht.
 b. ??[Mir davor gegraut] hat *(es) gestern nicht.

Second, contrary to ordinary dative NPs, (48), the dative experiencer can bind an anaphor, (49):

- (48) *Der Arzt zeigte *dem Patienten sich* im Spiegel.
 the doctor showed to-the patient himself in-the mirror
 (Grewendorf 1985:160)

- (49) daß *ihm* vor *sich* graut.
 "that he is afraid of himself"

Third, the experiencer can also appear in the *Vorfeld* when a quasi-argument is present. This is the case both with the lexical pronoun

es and with the null pronoun *pro*:

- (50) a. Ihn friert es.
 b. Ihm graust pro davor.

As we said before, a personal pronoun must move through the subject (specI') position in order to be topicalised. If the accusative/ dative pronoun bearing the θ -role "experiencer" moves to specI', the internal quasi-argument cannot occupy the same position. We claim that from its V'-internal D-structure position, it adjoins to IP where it will be assigned nominative Case:

- (51) a. daß [IP es_i / pro_i [IP $mich_j$ t_j t_i friert]].
 b. daß [IP es_i / pro_i [IP mir_j t_j t_i davor graut]].

On the basis of this discussion, the conclusion can be reached that the movement of the experiencer to subject position is possible with all impersonal psych verbs we are analysing, independently from their lexical entry.

When the movement applies, the question can be raised as to what the verb agrees with. We argue that the non-nominative NP in subject position does not agree with the verb, which gets the unmarked features of 3rd person singular. ⁽¹¹⁾

4.5. The licensing conditions of quasi-argumental *pro*

With the preceding discussion in mind, let us address the question of why only these constructions allow a quasi-argumental *pro* in German.

First note that empty quasi-arguments were much more attested in the previous stages of German. ⁽¹²⁾ We would like tentatively to suggest that the fact that the psych verbs we are discussing have not become completely "personal" and still allow an "impersonal" lexical entry has probably limited the loss of quasi-argumental null subjects in these structures, i.e. has preserved a category which is otherwise not found in German.

A possible explanation for this can come from the study of the licensing conditions of *pro*. These consist in the government of *pro* by a head and in the recovery of its content, which depends on the richness of the licensing head (cf.1.2.). Following Rizzi (1986), we claim that quasi-arguments are defined by having the specification of number. Since number is a property

of Agr^o, I^o/ Agr^o must be the licensing head of quasi-arguments. Our hypothesis is the following: the number specification necessary for the identification of a quasi-argumental *pro* is provided by the default number agreement which the finite verb undergoes in these constructions, because of the presence of an experiencer which moves to subject position. Since default number is left in German only in these constructions, a quasi-argumental *pro* is possible only here.

A look at a language such as Icelandic seems to support our hypothesis. Since default number agreement is much more widely exploited in Icelandic than in German, we would expect that quasi-argumental *pro* has a wider distribution, too. This is indeed what we find: *pro* can always carry a quasi-argumental θ -role. See for example the contrast between German and Icelandic in the appearance of *pro* with a weather verb (see also 1.4.2.):

(52) a. Regnete *(es) gestern?
rained it yesterday

b. Rignði *pro*/ *það í gær?

This analysis is not an alternative to previous accounts of the distribution of null-subject properties in the Germanic languages, but it represents a corollary to them, in that it helps to solve two problems which remained unsolved in those analyses.

The first problem is implicit in Platzack's (1987) analysis of Scandinavian languages, which treated non-argumental and quasi-argumental *pro* on a par, regarding them both as non-arguments. Such an analysis cannot account for the fact that some languages such as German allow only a non-argumental *pro* (apart from the cases under consideration here) and other languages such as Icelandic allow both a non-argumental and a quasi-argumental *pro*. (The same holds for Faroese (cf. Platzack 1987) and Yiddish (cf. Travis 1984)).⁽¹³⁾

Second, if the null-subject parameter correlates with the richness of verb-subject agreement, which manifests in rich morphological marking on the finite verb (cf. Taraldsen 1978 and Chomsky 1981:240ff), and if the difference between non-arguments and quasi-arguments resides in the specification of number (cf. Rizzi 1986), it does not seem clear why German and Icelandic are different: both languages make in fact a distinction of number in their verbal paradigm, and in both cases of non-argumental and quasi-argumental *pro* the verb is 3rd person singular.

We would suggest that in a non-referential null-subject language the licensing head is not specified for the relevant features. Therefore, only a non-argumental *pro* is allowed, which does not require features (see 1.2.2.).

Quasi-arguments are licensed when number features become available, as in the case of default (number) specification on the verb. The differences among the languages with regard to the distribution of quasi-argumental *pro* depend therefore on which contexts admit default features on the finite verb.

4.6. Conclusions

Taking as a point of departure the description of the argument structure of the class of impersonal psych verbs found in German, we have provided further evidence that there is no lexical non-argumental *es* in German and we have argued for the occurrence of quasi-argumental *pro* in German, contrary to what is usually claimed in the literature. Quasi-argumental *es* and quasi-argumental *pro* appear to have the same distribution with these verbs, which represent the only configuration of real optionality of *es* in German. This state of affairs can be traced back to the Least Effort condition. Finally, we have suggested a possible way of defining a theory of quasi-argumental null pronominals which has been thus far neglected in the cross-linguistic analyses of null-subject languages. Null quasi-arguments can be said to occur in semi pro-drop languages like German in those configurations in which the verb gets number agreement by default.

Notes to Chapter four

1. When the pronoun *es* cliticizes to the dative pronoun (see (8) above), the cluster must move to the clitic position in order for *es* to be assigned nominative (see Ch. 3, fn.6). In a raising context, *es* is moved to the matrix clause in order to receive Case:

- (i) Jetzt scheint *es* [t dich zu frieren].
"now it seems that you are cold"

This also holds for the null quasi-argument discussed in 4.2.3. below:

- (ii) Jetzt scheint *pro* [t dich zu frieren].

2. This could be the reason of why in substandard Italian, *avere* is marginally allowed by verbs that take a dative experiencer like *piacere*:

- (i) a. T'è/ ?ha piaciuto?
"did you like it?"
b. Questo film m'è/ ?ha piaciuto molto.

"I liked this film very much"

3. This is shown by the impossibility of cliticizing the subject pronoun *es* to a preceding dative NP, moved in front of it (see example (8) in the text and the relative discussion):

- (i) a. *? weil mir's kalt ist.
- b. *? Ist dir's kalt?

4. Sentence (21) has a grammatical reading (with PRO controlled by *mir*), which does not concern us here. Note that in this case, *kalt* must be allowed to select only an internal argument with the θ -role "experiencer", which however cannot be externalized (see the grammaticality of (26)):

- (i) a. weil mir kalt ist.
- b. *weil ich kalt bin.

5. For these verbs, there is a reflexive variant, which however does not concern us here:

- (i) a. Ich grause mich davor.
- b. Ich graue mich davor.
- c. Ich bange mich davor.

6. Other contrasts are given in (i) and (ii):

- (i) a. ? Ich hoffe nur, nicht zu frieren.
 I hope only not to be-cold
- b. * Ich hoffe, davor nicht zu grauen.
 I hope of-it not to be-afraid
- (ii) a. ? In Deutschland zu frieren ist ganz normal.
 in Germany to be-cold is very usual
- b. * Davor zu grauen ist ganz normal.
 of-it to be-afraid is very usual

7. On the other hand, an accusative clitic in Italian can only be fully argumental. See the ungrammaticality of (i), corresponding to (30) (sentence (ib) is from Burzio 1986:284):

- (i) a. * Lo ritengo caldo.
 (I) it-believe warm
- b. * Lo ritengo piovuto.
 (I) it-believe rained

The nominal part of the idioms in (iia) and (iia) cannot also be pronominalised:

- (ii) a. Ha prestato molta attenzione.
 (he) has payed much attention
- b. *L'ha prestata.

- (iii) a. Gianni ha mangiato la foglia.
G. has eaten the leaf (= "he has smelt the rat")
- b. *L'ha mangiata.

The impossibility of a clitic anticipating an extraposed clause (cf. Ch.3, fn.1) probably correlates with the ungrammaticality of (i) and (iib)-(iiib).

8. The phenomenon is known under the name of "quirky subjects". It is found in Icelandic and Faroese (see Platzack 1987 and the references cited there), and in Italian with psych verbs like *piacere*, to which Belletti and Rizzi (1988) assign the S-structure in (i):

- (i) [TP A Gianni_i [[vp piacciono t_j t_i] le tue idee_j]]
"G. likes your ideas"

However, an accusative experiencer cannot be moved to subject position in Italian (see (ii) from Belletti and Rizzi 1988):

- (ii) *Gianni preoccupa questo. (cf.: questo preoccupa G.)
"G. worries this"

The fact that this is instead possible in German (see below) probably correlates with the fact that Case is morphologically marked in German, so that no ambiguity arises as is the case in the Italian example (ii), where *Gianni* is understood as the grammatical subject marked nominative.

For reasons that we do not understand, the oblique experiencer subject of psych verbs in Italian (see Belletti and Rizzi 1988:fn.32) and German do not display the properties typical of (nominative) subjects; on the other hand, quirky subjects of Icelandic do (see Zaenan, Maling and Thráinsson 1985).

9. Stressed pronouns are R-expressions in German, hence their topicalisation is freely allowed like that of any XP.

10. A similar analysis is suggested in Holmberg (1986). Many recent studies have discussed the impossibility of topicalising unstressed pronouns in German (and Yiddish) (see Travis 1984, Tomaselli 1987, Diesing 1987, Santorini 1988). However, none of them takes into account the grammaticality of sentences like (44).

11. Belletti (1988a) makes the same suggestion for similar cases in Finnish and Icelandic.

12. For the discussion of subject pronoun *es* in the history of German and other Germanic languages, see Lenerz (1985).

13. This analysis also represents a problem because it correlates the referential null-subject property of a language with the licensing of *pro* by a θ -assigning head. Since in Italian the licensing head also assigns a θ -role to *pro*, *pro* can be argumental and referential. Since in the Germanic languages, *pro* is licensed by C°, a non θ -assigning head, *pro* can only be non-referential and non-argumental. This analysis disregards the quasi-argument status of the *pro* occurring with weather verbs.

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