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## 2. REGULAR ELLIPSIS

All natural languages have specific means for integrating contextual information. Ellipsis is one of them; others are deixis and anaphora.

By regular ellipsis, I refer to the phenomenon that, under certain complex conditions, the meaning of an utterance is systematically completed by the meaning of expressions which are not uttered but whose meaning is derived from the context. This contextual information may be taken from preceding or following utterances, from the perceivable situation — as in the utterance "not very impressive" said in front of the Niagara Falls — or else from factual knowledge; a typical case of this type is when a surgeon in an operation room says: "scalpel"; this utterance is regularly interpreted as "give me the scalpel", not as "this is a scalpel" or "buy a scalpel", although nothing in the utterance says the one or the other: it is the nurse's factual knowledge that leads her to the correct interpretation in the given context. The regularities of the last two types of ellipsis seem much less stable and much more difficult to grasp than those of verbal context, although there appears to be no principled difference between them.

In any event, it seems most sensible to begin with the clearest and most straightforward cases: that is, context information given by immediately preceding or following utterances. In this paper, we will only be concerned with cases of this sort. It should be noted, however, that this is a methodologically rather than theoretically motivated restriction. Most typical examples of verbal context are so-called adjacency pairs. The utterance "John" is regularly interpreted as "John is my best friend" after the question "Who is your best friend", but as "He called John" after the question "Whom did he call?" The utterance "No, I am" is regularly interpreted as "No, I am the greatest fighter of the world" after the statement "Dempsey is the greatest fighter in the world", but as "No, I am writing this paper" after the statement "Arnim is writing this paper". The best-known cases are probably coordinate structures, such as "John loves Mary and Peter (loves) Kate", where the second occurrence of "loves" may be omitted, or "John loves (his mother) and Peter hates his mother", where the first occurrence of "his mother" may remain unexpressed. The last example differs from all others mentioned before, since what has to be understood at this place is not yet available in the context — it is introduced only at the end of the second conjunct. These cases of "backward ellipsis" considerably differ from those in which the meaning of the items omitted is already available; but they fulfill the general definition of regular ellipsis given above, and so they are not excluded here.

All these types of ellipsis follow certain conditions of various kinds. There is a first class of conditions which may be stated in syntactic terms; for example, there might be rules such as

— in coordinations, an identical verb may be left unexpressed at the second (possible) occurrence, but not at the first,

— in coordinations, an identical object may be left out at the first occurrence, but not at the second,

— a "who"-question may be answered by an NP, but not by a VP (if after "Who is your best friend", the subject in the answer is omitted, the copula has to be left out, too; it is possible to answer "My best friend is John", or "John", but not "is John").

Other conditions must be stated in semantic terms. There is a very general condition, which says that the *meaning* of the elements that are left unexpressed has to be derivable from the context; that means that in the case of verbal context, it has to be derived from the preceding or following utterances. It should be clear that ellipsis, as understood here, is not a *deletion of identical expressions*, although at least some cases of ellipsis may be described that way. Let us illustrate this by some examples. In

(1) A man saw John and \_ called the police<sup>1</sup>

the first conjunct introduces a particular man — that man, who saw John and this man is now available in the context. It should be clear that this particular man is not introduced by the expression "a man", but by the whole first conjunct. There are devices to refer to the same individual in the second conjunct, for example the expressions "this man", "the man who saw John", or simply "he"; but in general, it is not possible to use the expression "a man" to this end, since this expression, when used in the position marked by "\_" in (1), does not specifically refer to the man introduced in the first conjunct; roughly speaking, it refers to some arbitrary man which can, but need not be identical to the individual which is given in the context. If we say that the second conjunct is elliptical at a certain position, this means that the meaning of "called a man" is regularly completed by a meaning given in the context, and in (1), this contextually given meaning would not be identical to the meaning of "a man". In

(2) Peter saw John and \_ called the police

the unit introduced in the subject position of the first conjunct, the individual Peter, could be referred to by the expression "Peter" in the second conjunct again, and we could imagine (2) as being derived by a deletion from

- (3) Peter saw John and Peter called the police.

But from (1) it should be clear that this is just a special, though not unusual case. Later on, we will sometimes speak of "identical strings", for example identical noun phrases as in (3); this always means that the corresponding strings *mean the same*, not that they are necessarily *identical in form*.

There is an obvious question at this point: what does "to mean the same" mean? I don't know. With many others, I assume that any speaker has an intuitive concept of "sameness of meaning", and without intuitive judgments based on this concept (or related concepts, like hyponymy), semantic analyses of languages seem hardly possible. But any attempt to give a satisfactory reconstruction of this intuitive concept in terms of a precise semantic theory, say model-theoretic semantics, soon faces numerous empirical problems, of which the specific problems in connection with ellipsis are only a particular facet. No such attempt can be made here; I will just illustrate the complexity of the phenomenon by discussing some examples which, incidentally, are still relatively straightforward when compared to the cases of ellipsis discussed in later sections of this paper.

In (1) and (2), the element introduced by the first conjunct and kept in the second conjunct was an individual. This need not be the case in elliptical constructions. In (4), no individual is introduced, but some rather abstract meaning entity; but it still can be "maintained" in the second conjunct:

- (4) A Chinese tends to esteem old age and \_ will always respect his parents.

The unit introduced here is something like the typical Chinese or the "generic" Chinese, and if we want to go on speaking about the generic Chinese in the second conjunct, he need not be referred to explicitly. If, on the other hand, we want to speak about a specific Chinese in the second conjunct, he could be introduced by the expression "a Chinese", too. But no ellipsis would be possible in this case:

- (5) A Chinese tends to esteem old age, and (a Chinese) once taught me why.

Strictly speaking, it is not correct to say that the specific Chinese in the second conjunct is introduced by "a Chinese" in the first; rather, it is introduced and available henceforth by the whole conjunct: "the Chinese person who first taught me why a Chinese tends to esteem old age". Individuals

and generic units are two possible types of meaning that can be introduced into the context and function as "elliptical items". There are others; in

- (6) The witness has to wait until he is called and \_ will obtain \$ 5 per hour waiting time

no specific and no generic witness is introduced. In the following German example (English behaves slightly differently in this kind of ellipsis)

- (7) Zwei wertvolle Bücher fehlten und ein weiteres kostbares \_ war zerfetzt

it is something like the concept of book which, after being introduced in the first conjunct by "Bücher", is understood, but left unexpressed at the place marked by "\_" in the second conjunct. - In

- (8) Arnim was sitting in the sun and Wolfgang (was sitting) in the kitchen

the meaning introduced in the context and used in the second conjunct is that of "was sitting", that is "to sit + past + continuous action" etc. In

- (9) Arnim was sitting in the sun and Wolfgang (was) writing in the kitchen

it is only something like the idea of "past" which is introduced and maintained.

These examples may suffice to illustrate the point. As said already, I shall make no systematic attempt to clarify what possible types of meaning can be introduced and how this is done. In what follows, I shall say that some meaning unit which has already been introduced in the context such that it might function as a possible object of ellipsis is *thematic*. This term, then, is restricted to cases in which the contextually given unit is already available at the place where it is left unexpressed; it does not cover cases of "backward ellipsis" like

- (10) John loves \_ and Peter hates his parents.

Here, I shall speak of *contextually expectable* meaning units. By and large, the same kinds of meaning units may be thematic and (contextually) expectable, but first, this is an empirical question, and second, their function in language processing is probably different. In the present context, thematic units are always introduced by preceding utterances, and expectable units by following utterances. It may be that this distinction cannot be sustained if, for example, units given by perceptual context are taken into account

too, for they might be fully simultaneous (e.g., in pointing while speaking). But this need not concern us here.

So much for semantic conditions. There is a third class which may vaguely be labelled "pragmatic", that is, conditions like elegance of style, economy - which traditionally is viewed as the main source of ellipsis — or the tendency to avoid ambiguity. Pragmatic conditions of this sort doubtless play an important role in the use of elliptic constructions, but nothing will be said about them in this paper.

And finally, there are intonational conditions; we will come to this problem in section 4. There is one point, however, which should be mentioned here. I don't think that intonational conditions should be treated as an independent fourth class. They are closely tied to syntactic and semantic conditions. The central semantic condition, for example, requires that the unit which is left unexpressed is either thematic or (contextually) expectable. Now, in German there seems to be a simple intonational device which characterizes a unit as thematic: to mark a unit as a thematic unit by verbal means, the expression which introduces it must have rising pitch. The precise position of the rise depends on the kind of unit to be introduced; if, as in (7), it is just a lexical concept expressible by a lexical item, it has to be in the stressed syllable of this item; if the unit to be introduced as thematic is expressed by a whole phrase, it has to be at the end of that phrase; it can also be at the end of a determiner, for example, if the noun following this determiner is *already* thematic. Let me give two German examples.

If Franz is not thematic, i.e. not given in the preceding context in a certain way, and we want to say about him that he is asleep, the pitch contour will be

(11) Franz schläft

The meaning expressed by "Franz" will be available, then, for ellipsis. Note that it is "thematic" exactly before "schläft" begins, that is, it is thematic already for "schläft". It is important to keep in mind that the "thematic score" of on-going discourse is not stable; thus, Franz is not thematic when the utterance "Franz schläft" begins, but he is thematic when "schläft" begins; hence, it would be more accurate to say "thematic at point *i* and to use subscripts to indicate this changing thematicity; for the present discussion, we just stick to "thematic" without further qualification. Another *caveat* might be in order here. Thematic (and contextually expectable) elements are *meaning units*, that is, for example, the person who is denoted

by the expression "Franz", not this expression itself. If there is no misunderstanding possible, we shall sometimes label expressions (in a given utterance) as being thematic; it should be clear that this is only a loose (but less clumsy) way of speaking. Let us conclude this by a somewhat more complex example.

If the concept of "parcel" (Paket) has already been introduced as a thematic unit, and we want to speak about a large one, than this large one has to be introduced as thematic, and the resulting pitch contour looks like this:

(12) ein großes Paket  
 - - - ( ~ ~ )

What has been said so far, is somewhat simplified<sup>2</sup>, but it gives a first idea of how semantic concepts and intonation structure are linked.

### 3. RULES OF REGULAR ELLIPSIS IN GERMAN

The general semantic condition has already been mentioned:

A: *A meaning need not be expressed if it is derivable from the context, that is, if it is either thematic or contextually expectable.*

Not every contextually derivable unit may be left unexpressed, of course. There are a number of additional syntactic restrictions. The following rules try to cover most of them. The following abbreviations are used: NC ("nominal complex") refers to noun phrases with a lexical noun (N); they also comprise constructions with a preposition, like "in der Kirche", "dort neben der Tür"; pronouns and clauses functioning as noun phrases are not included. By VC, I mean a finite verb, auxiliary or modal (F) with the very many nonfinite parts (IF) it may have in German; for example, "geht" is a VC which just consists of a finite part; "ist gekommen" consists of a finite part ("ist") and a nonfinite part ("gekommen"); "verprügelt worden müssen sein soll" has a long IF ("verprügelt worden müssen sein") and the modal "soll" as its F; the distinction between F and IF plays an important role in German syntax, and it is crucial, too, for ellipsis. The notion "F-environment" refers to F and its immediately adjacent elements. Similarly "N-environment" means N and adjacent parts; for example, in "ein junges Mädchen mit blonden Haaren", there are, among others, the following N-environments: "Mädchen", "junges Mädchen", "Mädchen mit", "junges Mädchen mit", etc. Let us turn now to the rules. Basically, there are three<sup>3</sup>:

- E 1: *Identical final string may be left unexpressed at the first occurrence in coordinations.*
- E 2: *Identical initial string may be left unexpressed at the second occurrence in coordinations.*
- E 3: *Thematic F-environment and thematic N-environment may be left unexpressed.*

These are the central rules. There are some clear and some doubtful extensions of E 3:

- E 4: *With F, any further constituent may be left unexpressed.*
- E 5: *With F expressed, there is a tendency of possible omissions:*
- a) *IF (non-finite part) of V rather than NC*
  - b) *pronoun rather than full NC*
  - c) *the earlier the easier*
  - d) *subject rather than direct object rather than indirect object rather than prepositional object.*

Furthermore, there is a very general restriction on E 2 — E 5:

- B: *For E 2 - E 5 to apply, the syntactic relations of the remnant to the remaining part of the sentence must be clear, and they are not allowed to cross subordinate conjunctions.*

Admittedly, this formulation is not very clear. We shall discuss some of the problems it raises in the following sections.

In addition, there are several restrictions on what may be thematic.

As a rule, it can be said that syncategorematic units as such never introduce thematic meanings, that is, the function of, e.g., a preposition, a quantifier, a determiner cannot be maintained. This, too, will be discussed in the following paragraphs.

In the remainder of this section, we will consider these rules and some restrictions in more detail.

### 3.1 Rule E 1: *Identical final string may be left unexpressed at first occurrence in coordinations.*

This rule is the only one which concerns contextually expectable rather than thematic units. It is extremely general: the only restriction seems to be that the contextually derivable unit has to be introduced in a coordination. It is open, however, which units are coordinated — clauses, verbal complexes, nominal complexes, or what else.

Secondly, it is not required that the unexpressed element correspond to a constituent nor, that the remnants be a constituent:

- (13) Fritz soll seiner (Mutter helfen) und Gabriele soll ihrer Mutter helfen.

Obviously, neither "Fritz soll seiner" nor "Mutter helfen" is a constituent.

Third, the two last non-identical units — "seiner" und "ihrer" in (13) — have a special function; as a rule, there is an opposition between them which is expressed by intonation; they are often described as being "stressed"; what happens is that the first item — "seiner" in the example above — is relatively high in pitch, whereas its counterpart is relatively low.

Fourth, ellipsis in accord with E 1 does not have pronominalization as an alternative. This is trivially true in cases like (13), since there is no anaphoric device for strings like "Mutter helfen". But even when just a single NC is omitted, it cannot be substituted for by a pronoun:

- (14a) Fritz haßt \_ und Irma liebt das Leben.  
 (14b) Fritz haßt es und Irma liebt das Leben.

This does not mean, of course, that pronominalization is impossible in this position, but then, the corresponding item has to be introduced earlier, for example in the preceding sentence.

Fifth, it should be noted that not all omissions of a final segment in a first conjunct are instances of E1. They may be a case of E 3, if the item in question has been introduced before, that is, if it is a thematic item. After a question like "How many books did they buy", it could be alternatively said:

- (15) Fritz kaufte zwei Bücher und Karl kaufte drei Bücher.  
 (16) Fritz kaufte zwei \_ und Karl kaufte drei Bücher.  
 (17) Fritz kaufte zwei Bücher und Karl kaufte drei \_ .  
 (18) Fritz kaufte zwei \_ und Karl kaufte drei \_ .

The second of these possible answers formally corresponds to an E 1-ellipsis, at least in its written form; intonation in these different cases would vary, however.

Sixth, the fact that in E 1-ellipsis, the contextually derivable element (or elements) is not thematic, but contextually expectable, does not mean that the expectable and eventually introduced element cannot be *made* thematic at the point where it comes in, just as in example (11) above ("Franz schläft") "Franz" is not yet thematic, but is made thematic by a specific

intonation. Since this is not the place to discuss the interplay of such intonational devices and notions like "thematic" in more detail, I will just illustrate this point by a single example; in

- (19) Zuerst kochte (Franz zwei Eier) und dann aß Franz zwei Eier

the NC "zwei Eier" may have thematic intonation — with eventual terminal fall, however; in this case, "aß" must be low; or else, "zwei Eier" has a fall in the stressed syllable; in this case, "aß" must be high.

Seventh, E 1 raises a special problem, if, in the first conjunct, only one constituent is left behind; if this constituent happens to be an NC, it is immediately followed by the first constituent of the second conjunct. The result looks like a simple coordinate NC. In this case, the verb has to be pluralized, if it was not already, and so do other items relating to these adjacent NCs such as possessive pronouns. This may be illustrated by the following series of examples:

- (20) Fritz schenkte seiner Mutter drei \_ und Karl versprach  
seinem Vater zwei Bücher.
- (21) Fritz schenkte seiner Mutter \_ \_ und Karl versprach  
seinem Vater zwei Bücher.
- (22) Fritz schenkte \_ \_ \_ \_ und Karl versprach  
seinem Vater zwei Bücher.
- (23) Fritz \_ \_ \_ \_ \_ und Karl versprachen  
seinem Vater zwei Bücher.

Obviously, there is a break between (22) and (23). This a simple consequence of what has been mentioned under point 3 above — that there has to be a certain opposition between the two last nonidentical units; this makes no sense in (23) because what is said about Fritz and about Karl is absolutely identical. If a conjunction is used which allows for such an opposition, for example "oder" in its exclusive reading, E 1 can be applied "radically" — that is, omitting anything but one constituent in the first conjunct.

- (24) Fritz oder Karl versprach seinem Vater ein Buch.
- (25) Fritz oder Karl hat gewonnen.

If "oder" does not have this exclusive reading and hence there is no opposition between the two NCs, E 1 cannot be applied; verb and possessive pronoun have to be pluralized:

- (26) Fritz oder Karl versprachen ihrem Vater ein Buch.

There are cases, however, in which the idea of lacking contrastivity seems not to work and in which E 1 applies up to the first constituent in the first conjunct. For example

(27) Gestern und heute besuchte mich Franz

does not — on the most plausible interpretation — mean that Franz came to see me sometime in the period defined by "gestern und heute", but rather that he came twice: one time yesterday and one time today; that is, it means the same as

(28) Gestern besuchte mich Franz und heute besuchte mich Franz.

This is not restricted to adverbials. Sentence

(29) Mir und Otto hat man ein Buch geschenkt

can mean, that the group consisting of the two of us got a book, or it can mean what is unambiguously expressed by

(30) Mir (hat man ein Buch geschenkt) und Otto hat man ein Buch geschenkt.

Hence, (29) could be seen as being produced by a "radical" application of E 1. So, it does not seem plausible to restrict E 1 in such a way, that it is not allowed to reach the first constituent, though there are some cases in which this "radical" application appears to be inappropriate. We shall take up this issue in later sections.

Finally, E 1 indeed seems to require formal and not only semantic identity. It is possible to say

(31) Franz bestellte zwei \_ und der Kellner brachte vier Eier

but it seems impossible to say

(32) Franz bestellte zwei \_ und der Kellner brachte ein Ei

although the concept of "egg" is contextually given in both cases. (Note that (32) is possible, of course, if "Ei" was thematical already, but then, it would be an E 3-ellipsis.) If this is true, E 1 *could* be treated as a real case of "deletion". It should be observed, however, that formal identity again includes intonational characteristics. E 1 must not override "contrastively marked" items. This may be illustrated by two possible coordinations of NCs (the "contrastive" items are marked by accents):

- (33) vór diesem Tisch und hinter diesem Tisch  
 (34) vor diesem Tisch und hinter diesem Tisch

In (34) only "Tisch" may be left unexpressed, whereas in (33), the whole NC may be omitted at the first occurrence. This does not mean, however, that only "unstressed" elements may be left out; it is possible to say "vor und nach dieser Schlacht", and this could be even synonymous to "vor dieser Schlacht und nach dieser Schlacht", if "dieser Schlacht" has the same pitch pattern in both cases — for example in opposition to something mentioned earlier. Hence, this does not violate the principle that E 1 requires identity in form (but not only identity in form, of course).

3.2 Rule E 2: *Identical initial string may be left unexpressed at the second occurrence in coordinations.*

This rule accounts for cases of ellipsis like:

- (35) Wird der Held den Drachen bezwingen und (wird der Held) die schöne Jungfrau heimführen?  
 (36) ... weil der Held den Drachen bezwang und (der Held) die schöne Jungfrau heimführte  
 (37) Der Held hat die schöne Jungfrau bezwungen und (der Held hat) den Drachen heimgeführt.

Thus, it seems to be the exact counterpart of E 1, and in early discussions of "coordination reduction", E 2 has often been treated on a par with E 3. This is misleading, however. First, ellipsis according to E 2 may be replaced by pronouns (if the thematic item allows for pronominalization at all), whereas ellipsis according to E 1 does not:

- (38) Fritz klopfte mir auf die Schulter und er/Fritz/ Ø lachte dabei.

Note, however, that the use of pronouns underlies certain additional restrictions; for example, it often seems impossible to use a pronoun in this position, if it replaces a (direct or indirect) object:

- (39a) Dieses Buch schätze ich sehr und (dieses Buch) habe ich schon mehrfach verschenkt  
 (39b) Dieses Buch schätze ich sehr und es habe ich schon mehrfach verschenkt.

But this is rather a general problem of pronouns, since it is always strange

to use a pronoun like "es" in object function in this position. There is no doubt that, in principle, NC-ellipsis according to E 2 has pronominalization as a true alternative.

A second and more salient difference is, that E 2 very often does not permit deletion of formally identical expressions. This was already discussed in section 2 (examples (1)—(3)); so, the sentence "A man saw John and \_ called the police" is not an elliptic version of "A man saw John and a man called the police", since the semantic condition A is not fulfilled.

Thirdly, E 2 cannot "intrude" as easily into the second conjunct as E 1 does intrude into the first one. It is not possible to omit "mit seiner" in the second conjunct of:

- (40) Mit seiner Schwester verstand sich Fritz gut und (mit seiner) Mutter unterhielt er sich häufig.

This is a simple consequence of the restriction expressed by condition B: the whole syntactic characterization of the NC is destroyed, and its relation to "unterhielt er sich häufig" is no longer transparent. There seems to be an additional reason. The meaning unit which is left unexpressed has to be thematic; the semantic function of elements like determiners or quantifiers (in brief, "binders") cannot be thematic, however (as opposed to the meaning of quantified or determined NCs, of course).

In brief, E 1 and E 2 are not just versions of a single rule, that differ only in their direction of application: identical final string to the left, identical initial string to the right. Their difference is essentially linked to the different ways in which the contextually derivable meaning units are given: in E 1, they are contextually expectable, in E 2, they are thematic.

Despite its more restricted application as compared to E 1, E 2 is still relatively unbounded. Thus, it is not restricted to specific constituents, so long as B is obeyed. In the following examples, the meaning left unexpressed corresponds to an NC, an IF and an F, respectively:

- (41) Der Suppe fehlt das Salz und (der Suppe) täte weniger Wasser gut.  
 (42) Heiraten wollte der Vater Maria und (heiraten) mußte er meine Mutter.  
 (43) Wollte Fritz Maria heiraten und (wollte) Irma sich mit ihm verloben?

Moreover, neither the unexpressed part nor the remnant need to be a constituent at all; "Irma sich mit ihm verloben" and "mußte er meine Mutter"

are definitely not constituents, nor is "wird der Held" in (35) or "der Held hat" in (37) a constituent.

Incidentally, these examples also show that some recently advanced restrictions on forward deletion, such as the "major constituent constraint" advanced by Hankamer (1973) and by Neijt(1979) or the "head constraint" by Fiengo (1974) are simply wrong for German.

Just as for E 1, E 2 may lead to some problems when applied "radically" — that is, when everything but one constituent is left out. It then becomes difficult to distinguish between immediate coordination of the two adjacent constituents and far-going application of E 2. This may again be illustrated by a series of expanding identical initial strings (for illustrative purposes they are identical in form, but it should be kept in mind that this is not the crucial point):

- (44) weil Fritz seiner Mutter ein Buch versprach und \_  
 seinem Vater eine Brieftasche schenkte
- (45) weil Fritz seiner Mutter ein Buch versprach und \_ \_  
 eine Brieftasche schenkte
- (46) weil Fritz seiner Mutter ein Buch versprach und \_ \_ \_ \_  
 schenkte

In (46), "versprach und schenkte" could be treated as a "compound verb", but there appears to be no clear criterion to decide between this description and the ellipsis-analysis. There are cases in which the "compound"-analysis — often labelled "phrasal conjunction" — seems preferable, for example, if the immediately adjacent constituents are in subject position, as in

- (47) Einen Porsche fährt/fahren Maria und Günter.

Even in this case, it is not fully clear to me whether the plural "fahren" is obligatory — which would clearly indicate the compound-NC-analysis — or whether "fährt" is also possible.

It should be noted that the really clear cases of phrasal conjunction have a completely different intonation pattern. In all cases of E 2, the two corresponding items can be marked by a high-low-opposition, as in (45) "ein Buch" (high) vs. "eine Brieftasche" (low), or in (46) "versprach" vs. "schenkte" (low). It seems less possible to use this pattern in cases like

- (48) Männer und Frauen füllten die Kirche zur Hälfte.
- (49) Der Vater und die Mutter lieben sich.
- (50) Fritz säuft und frißt abwechselnd.

Applying the contrastive pattern to "Männer und Frauen" in (48) - and similarly to the phrasal conjunctions in (48) and (49) — even seems to indicate that each group filled half of the church. This probably demonstrates that there are E 2-applications up to the last constituent.

E 1 and E 2 are both restricted to coordinations, though to coordinations of various constituents. But their function in these coordinations is quite different from a processing point of view. What happens in E 1 is that processing — both production and comprehension — is interrupted at a certain point by "und", a second parallel segment is built up until the corresponding point has been reached, and then, the still missing but expectable part is completed for both parallel segments. There is no such interruption and eventual completion in E 2, but something that is already contextually available ("thematic") is taken over, it remains valid in a certain function, and only what is new is added: after the first conjunct has been completely built up, another one which is partly identical in meaning is added, and so long as it is identical, everything is "silently" maintained. New elements are expressed right from the point where the second conjunct starts being different.

The contextual information supplied within coordination is always given in the immediate neighbourhood. This allows for relatively unlimited application of ellipsis, since the unexpressed, but thematic or contextually expectable meaning is under close control. There is the possibility, too, to omit elements whose meaning is less immediately given: those of E 3, to which we will turn now.

### 3.3 Rule E 3: *Thematic F-environment and thematic N-environment may be left unexpressed*

This rule could be seen as an extension of the classical "gapping" - rule (Ross 1970, Neijt 1979). As stated above, it is much more general, however. In particular, it goes far beyond the "deletion" of identical verbs, and it also includes NC-ellipsis and VC-ellipsis (in what follows, we shall consider almost no cases of VC-ellipsis, since they are relatively uninteresting; cf. Klein (1979), ch. 9). E 3 concerns thematic elements, like E 2, but as opposed to E 2, its application is not restricted to coordination. The most typical examples outside coordination are partially thematic NCs and question-answer-sequences (or adjacency pairs in general).

Typical cases of NC-ellipsis are

(51) ... eine Wohnung in Stuttgart und eine (Wohnung) in München

- (52) ... besaß zwei neue Häuser in Stuttgart; es stimmt aber nicht, daß er auch einige (neue Häuser) in München hatte.
- (53) ... nur eine Frau mit roten Haaren gesehen; gesucht hatte er eine (Frau) mit schwarzen (Haaren).
- (54) Ich hätte gern ein frisches (Handtuch) [raising a dirty towel].

The last example goes beyond verbal context; it shows that E 3 needs no verbal introduction of the contextually given item. This seems less plausible for ellipsis of F-environments, however, though it is not fully impossible. In the following example, both F ("hast") and an adjacent NC can be omitted:

- (55) (Hast du/haben Sie) gut geschlafen?

Coming back to cases of verbal context, it may be noted first that in (52), the elliptical NC "einige in München" could also mean "einige Häuser in München" rather than "einige neue Häuser in München". E 3 only says that an N-environment may be left unexpressed, if it is thematic; in (52), both "neue Häuser" and "Häuser" are contextually given, and there is no requirement that the omitted part should be maximal, that is, should correspond to the largest possible thematic element. The way in which "einige in München" is interpreted depends on pragmatic criteria. But it could not mean "einige neue Häuser in München", if the preceding sequence has not introduced "neue Häuser", but "Häuser" only.

NCs with a missing N-environment should still be syntactically viable NCs, that is, they should be able to function as subject, object, or whatever, to a verb, etc. It might be helpful at this moment, to have a somewhat closer look to NCs in general. Roughly speaking, an NC consists of four types of elements:

- (a) A *binder* (quantifier or determiner), which indicates a specific way of selecting something from something. Typical possibilities of binding may be paraphrased as
- an arbitrary and not further specified element of \_ ("a");
  - an arbitrary and not further specified amount of \_ (partitive, often not morphologically marked);
  - the obvious selection from \_ ("the").
- (b) A filling of the slot left open by the binder. There are several possibilities:
- by expressions of *concepts*, for example nouns, nouns with attributes, etc.; "a girl" means, "from among the girls a not further specified element"; "the girl" means "from among the

girls that one which is obvious, for example, known already or identifiable when you hear this", etc.

- by gestures; "that one" (with gesture) means "among all visually identifiable elements in this situation that one I am pointing to";

— by other contextually available units, in particular by thematic concepts; this is the starting point for NC-ellipsis.

- (c) Elements which determine the syntactic functions of the NC, for example case markers, prepositions, etc.
- (d) Suppletive parts, for example appositions, non-restrictive relative clauses and other elements, which may be added to the bound and syntactically marked concept.

Suppletive parts can never be thematic, nor can binders or syntactic markers as such be thematic. One should distinguish, however, between the function of a binder within an NC and the function of an NC, if this NC has no explicit concept element; this is often the case in elliptic NCs. The binder — or more generally, the remnant — then represents the whole NC. This is clearly marked by strong morphological inflection:

- (56) Fritz suchte ein Mädchen; schließlich fand er eines, das ihm gefiel.

What is meant is that he found a girl, not a somewhat; but since the indefinite article represents the whole NC, it is strongly inflected: "eines", rather than "ein".

Rule E 3, as formulated above, does not exclude that the binder belong to the N-environment and hence is also left unexpressed, if this N-environment is thematic. This may lead to a violation of B; in the following example, only a preposition would be left to represent a full NC in relation to subject and verb, and this leads to an unacceptable sentence:

- (57) Vor dem Haus war ein kleiner Garten und hinter \_ \_ lag ein Acker.

Leaving "dem Haus" unexpressed is impossible here, but this is not because E 3 would not allow it in principle; if no syntactic relation to the remainder of the sentence exists, a preposition like "hinter" may indeed be used as a remnant of E 3. After uttering the following question

- (58) Lag der Acker vor dem Haus oder lag der Acker hinter dem Haus?

a number of items are made thematic, in particular a house, a field, and that

this field was located somewhere. There are various possible answers, if it was behind, for example

- |      |                               |                                       |
|------|-------------------------------|---------------------------------------|
| (59) | Der Acker lag hinter dem Haus | (no ellipsis)                         |
| (60) | hinter dem Haus               | (F-environment)                       |
| (61) | hinter                        | (F-environment and<br>N-environment). |

This was one example of the second important group of cases where E 3 goes beyond E 2. To illustrate this point further, it seems best to give some examples of F-environment omission, with or without simultaneous N-environment omission. First, consider question contexts:

- (62) Wer ist gekommen? Fritz (ist gekommen).  
 (63) Wer hat wen geheiratet? Franz (hat) Maria (geheiratet).  
(E 3 + E 4)  
 (64) Was hat Karl gemacht? (Karl hat) geschrieben.  
 (65) Ist Franz gekommen oder Karl gegangen? Karl (ist) gegangen.

A second group are rejections and corrections:

- (66) Karl ist gekommen. Nein, Franz (ist gekommen).  
 (67) Karl hat Irma geheiratet. Nein, Franz (hat) Maria (geheiratet).  
(E 3 + E 4)  
 (68) Karl hat angerufen. Nein, (Karl hat) geschrieben.  
 (69) Franz ist gekommen. Nein, aber Karl (ist) gegangen.

E 3 also applies to coordinations, of course:

- (70) Karl ist gekommen und Fritz (ist gekommen).  
 (71) Karl hat Irene geheiratet und Franz (hat) Maria (geheiratet).  
 (72) Karl hat angerufen und (Karl hat) geschrieben.  
 (73) Franz ist gekommen und Karl (ist) gegangen.

There is a slight overlapping between E 2 and E 3 in this last case, if the F-environment happens to be the initial string of the second conjunct — as in (72). But it is not possible to integrate E 2 into E 3, since in non-coordination contexts it is not possible, as a rule, to omit the initial string, if F remains. Compare

- (74) Karl wollte zuerst etwas essen und (Karl/er) mußte deshalb etwas warten.

- (75) Weshalb kam Karl nicht? (Karl/er) mußte etwas warten, weil er zuerst etwas essen wollte.
- (76) Karl kommt sofort. Nein, (Karl/er) muß zuerst etwas essen.

Only in (74), ellipsis is possible; in (75) and (76), the individual Karl introduced in the preceding utterance has to be referred to again in the second utterance, either by repeating the name or by a pronoun. Thus, there are cases in which E 2 is applicable within coordination, but no corresponding ellipsis is allowed in other contexts. On the other hand, E 3 would not cover all possible cases within coordinations; in (77) ellipsis is possible, but E 3 would not allow it:

- (77) Weil der Vater der Mutter seine Rückkehr ankündigte und (der Vater) (der Mutter) einen Ausflug versprach.

Hence, it seems necessary to keep E 2 and E 3 apart. It should be noted that many elliptical utterances produced by E 3 look very peculiar, at first glance. At first glance, most people would deny that

- (78) Er das Hemd

is a syntactically well-formed utterance but it is a perfect answer to "Hat er das Hemd gekauft oder sie die Hose?". On the other hand, there are indeed some problematic outcomes, two of which we will consider now. E 3 does not say that the F-environment left unexpressed must be *maximal*, that is, if two constituents are thematic, one of them F, it is not required that both are really left out. This leads to impossible utterances, however, at least in some cases:

- (79) Hat Fritz geschlafen? Nein, Fritz (hat) gearbeitet.
- (80) Wer hat das Spiel gewonnen? Bayern München (hat) (das Spiel) gewonnen.
- (81) Was kaufte er denn? Er (kaufte) das Hemd.

In all of these examples, the other omissible elements "gearbeitet", "gewonnen" or "er" must be left unexpressed, too. This would be easily accounted for by stipulating that in E 3, the F-environment has to be maximal. I am not very much in favor of this — possibly inevitable — solution, for three reasons. First, I would like to consider ellipsis in general as an optional device, whose application is left to the speaker and to pragmatic factors. Second, it is still possible to be *fully* explicit: it is perfectly appropriate to express everything in (79)-(82). And third, maximality is not required by

the other ellipsis rules, in particular not for the N-environment. So, I would rather leave this matter for further research. But it should be clear that there is a quick way to remedy inappropriate output of E 3, as in (79)—(82).

The second problem seems somewhat related. Among the possible answers to "Lag der Acker vor oder hinter dem Haus?" (see (59)—(62) above), we did not mention one which is allowed by E 3 but which is completely inappropriate:

(82) (Der Acker lag) hinter dem (Haus)

"Haus", of course, is an N-environment, so (82) should be possible. But it is not. Note, first, that "hinter dem" is allowed, of course, if "dem" is "stressed", for example in

(83) Lag das Haus hinter dem Haus? Nein, hinter dem.

or

(84) Hinter welchem Haus lag der Acker? Hinter dem.

The easiest solution again would be to stipulate maximality, in this case maximality of N-environment. This is wrong, however. It is not necessary, though stylistically better, to omit "blauen" in

(85) Willst du diesen blauen Pullover? Nein, diesen blauen will ich.

Note, too, that it is not odd to repeat an (unstressed) indefinite article:

(86) vor einem Baum und hinter einem \_  
vor einem Baum? Nein, hinter einem \_

Hence, this difference must somehow be attributed to the different functions of the determiner. Seemingly, a definite article, if not specifically "stressed", cannot represent a full NC, whereas an indefinite one can. In (86) and (87), the indefinite article has its usual function: to select an arbitrary element from the class defined by the concept, in this case the concept of "tree". Since "tree" is thematic already, it need not be repeated, and "einem" represents the whole NC. But this does not answer the question *why* "dem" (in (82)) cannot have this representative function. Obviously, nothing new is selected by repeating "dem", as opposed to "einem", and thus, it is superfluous. But saying "hinter dem Baum" rather than "hinter dem" is even more superfluous, and it is perfectly possible. Hence, it cannot be a purely pragmatic reason, either, such as a principle like "avoid redundancy". This is also clearly shown by the fact that a definite article may be kept in E 1 - ellipsis:

(80) vor dem \_ und hinter dem Baum

There might be a completely different answer still, though it is a somewhat speculative one. For E 3 to apply, the meaning units in question must be thematic, that is, they have to be marked as thematic in the preceding context. It may well be, that an NC with "einem" can introduce two items as thematic, namely the meaning of "ein N" — that is, some unspecified element of N — , and the meaning of N — that is, the concept expressed by N; hence, both of them are accessible to ellipsis, but if the meaning of N is chosen, a full NC must be freshly marked as thematic, and this is done by "ein". On the other hand, an NC with a definite article can only mark or leave as thematic its content as a whole. Thus, after "der Baum", there is no concept as such available for ellipsis, and that is why "hinter dem" is impossible in this context. This seems to be confirmed by several observations.

First, "hinter dem" (not "hinter dem", which is possible anyhow) is not excluded if the ellipsis is not thematic but is ellipsis of contextually expectable elements; in (88), the concept is contextually expectable, and hence, ellipsis is possible.

Second, "hinter dem" is appropriate, too, if the preceding context is such that not only an NC-content, but a concept, too, is thematic:

(89) Zu meinem Erstaunen kam zuerst ein Chinese. Erst hinter dem sah man . . .

In (89) "dem" is even obligatory: it is impossible to use simply "hinter"; that is, (89) is the exact counterpart to (82), where it is excluded.

Third, this line of explication fits well the general idea of how a definite article is often used: it takes up the content of an NC which is already available in the given context.

3.4 Rule 4: *With F, any further constituent may be left unexpressed*

This rule confirms and even extends the crucial role of the finite element: any constituent may be left out, if it is thematic and if F is left out, too. Just as in the case of E 3, some outcomes are not fully convincing. Let us consider some examples first:

- (90) Karl schenkte seiner Mutter ein Buch und  
 (a) Otto \_ seiner Tante \_ \_ .  
 (b) Otto schenkte seiner Tante \_ \_ .  
 (c) Otto lieh        seiner Tante \_ \_ .

- (91) Karl hat seiner Mutter ein Buch geschenkt und  
 (a) Otto \_ seiner Tante \_ \_ \_ .  
 (b) Otto hat seiner Tante \_ \_ \_ .  
 (c) Otto hat seiner Tante einen Ring \_ .
- (92) Fritz liebt Wagneroperen und  
 (a) Otto \_ \_ .  
 (b) Otto liebt \_ .  
 (c) Otto haßt \_ .
- (93) Hat Otto seiner Mutter ein Buch geschenkt?  
 (a) Nein, Karl \_ seiner Tante \_ \_ \_ .  
 (b) Nein, Karl hat seiner Tante \_ \_ \_ .
- (94) weil der Vater seiner Freundin einen Ring schenkte und  
 (a) der Onkel \_ \_ einen Diamanten \_ .  
 (b) der Onkel \_ \_ einen Diamanten schenkte.  
 (c) der Onkel \_ \_ einen Diamanten versprach.

In all of these cases, only version (a) is possible, that is, the version without F. Two observations are particularly striking:

— It does not matter whether F is a lexical verb, as in (90) or (92), or an auxiliary; it may also be a modal verb, a case not represented in the examples above. Hence, the special role of F has nothing to do with the lexical content of a verb, but with "tensedness".

— The position of F does not matter, either; it may be in final position, as in (94), or in second position, as in (90)—(93); it may also be sentence-initial, a case not illustrated here. Hence it is not the specific function of F to mark subordinate, main and question clauses which gives it its key role for ellipsis.

As the examples in (93) show, the preceding utterance need not be coordinated with the (possibly) elliptic utterance, nor spoken by the same speaker.

The key role of F as an entrance gate to ellipsis is obvious; both the application of E 3 and E 4 crucially depend on whether F is gone or not. But it is hard to understand this specific predominance of F.

One of the most vexing points is the fact that this restriction holds independent of whether F is thematic or not. This is best exemplified in (92b) and (92c). Obviously, in (92b), both "liebt" and "Wagneroperen" are thematic; but it is not possible to omit "Wagneroperen" alone, just as it is problematic to omit "liebt" alone (this corresponds to the possible requirement that the F-environment has to be maximal). In (92c), only "Wagneroperen" is thematic,

but it cannot be left unexpressed, either. Finally, it should be noted that all of these kinds of ellipsis presuppose a rather characteristic intonation pattern. The last element left behind must have a "contrastive" counterpart in the preceding utterance: "seine Tante" is contrasted to "seiner Mutter" in (90), "Fritz" is contrasted to "Otto" in (92), etc. This is not a sufficient condition, however, as (92c) demonstrates.

3.5 Rule E 5: *With F expressed, there is a tendency of possible omissions:*

- (a) *IF (non-finite part) of V rather than NC*
- (b) *pronoun rather than full NC*
- (c) *the earlier the easier*
- (d) *subject rather than direct object rather than indirect object rather than prepositional object.*

This rule differs from the others, since it reflects only a tendency. Essentially, it is an exception to E 4. In some cases, the presence of E does not hamper the omission of other constituents, and this possibility is gradual: there are several scales, like position, syntactic function, etc. Since E 5 seems weakly founded, I shall only give some examples of the most clear cases where it holds. These are omissions of IF (i.e. the non-finite part of VC) with F in second position and nothing left behind F:

- (95) Karl wollte kommen und Otto mußte \_.
- (96) Wollte oder mußte Karl heiraten? - Er mußte \_.
- (97) Ist oder war er in München? \_ Er war \_ \_.
- (98) Karl war in München \_ Nein, er ist \_ \_.

In the last example, it is not an IF that is omitted, but an adverbial with predicative function. In general, application of E 5 is favored if the F left behind is an auxiliary or a modal verb rather than a lexical verb. However, I have no idea whether these tendencies are nothing but an artificial product of my (and some other speakers') idiosyncratic judgments, or whether they reflect some deeper grammatical principles. In what follows, no particular use is made of this rule, except in some clear cases, as in the examples quoted above (for a more detailed discussion, see Klein (1979), ch. 3, 4 and 9).

#### 4. PROBLEMS

The rules discussed in the preceding sections are very simple and extremely general. They cover most cases of ellipsis in German. This seems to be a

desirable result. But the rules, as they are, are unsatisfactory on at least three grounds:

1. There are a number of cases in which they lead to wrong or at least doubtful results; some examples have been given above, such as (79)-(82); it is not difficult to find others.

2. In many cases, the application of an ellipsis rule depends on a specific intonation pattern which, in turn, reflects particular syntactic or semantic functions of various elements in the utterance. I have pointed out some of these cases, and we will come back to this problem in a moment.

3. The rules, as they are currently formulated, give no clear and consistent picture. Why is leftward ellipsis so strikingly different from the other cases? Why does coordination differ — as in E 2 — from other possibilities for establishing a context by introducing thematic elements? How should one explain the extraordinary role of the inflected part of the verb? For a description to be an explanation, it has to make us happy; this one does not.

There is a final point which needs clarification - the interaction of the five rules, in particular E 1 (the only backward gapping rule) with the other ones. In some cases, simultaneous application is quite natural, for example E 1 and E 2:

- (99) Karl lieh seiner Mutter (1000 Mark) und (Karl) schenkte seiner Freundin 1000 Mark.

But there are numerous cases in which simultaneous application of E 1 and, for example E 3 seems questionable or simply impossible:

- (100) obwohl er ein altes Auto (besaß) und ein neues (Auto) besaß  
 (101) Karl lieh seiner Mutter (1000 Mark) und Otto (lieh) seiner Freundin 1000 Mark.  
 (102) Karl lieh (seiner Freundin) (1000 Mark) und der Onkel (lieh) seiner Freundin (1000 Mark).

The first two cases sound somewhat strange, but not fully unacceptable, whereas (102) is very peculiar and, to my judgment, impossible.

All of the insufficiencies mentioned above require further investigation. In the remainder of this paper, I shall discuss one of them in more detail: intonational conditions. The aim of this discussion is modest: we shall briefly consider three elementary cases of ellipsis, all of them known from section 3, which strikingly highlights the role of intonation. I cannot offer any answer to the problems raised there, and I don't see how the best available analyses

of intonation — like Bierwisch (1966) for German - could be extended such as to account for them.

Let us consider a first case. A simple sentence like

(103) Amim kochte und Wolfgang aß ein passables Abendessen.

can be interpreted in two ways, depending on whether "ein passables Abendessen" is taken to be the object of "kochte", too, or whether "kochte" is used as an intransitive verb. In the first case, it is an instance of E 1 -ellipsis:

(104) Amim kochte (ein passables Abendessen) und Wolfgang aß ein passables Abendessen.

In the second case, it is essentially synonymous to a conjunction of the two elementary sentences:

(105) Amim kochte. Wolfgang aß ein passables Abendessen.

These two interpretations of (103) are clearly discriminated by different intonation patterns. It is not obvious, however, how they should be described in terms of traditional intonation analysis. In the non-elliptic reading, "kochte" seems to have a sort of "terminal intonation"; this would mean in von Essen's classical description (von Essen, 1956), that the first syllable of "kochte" is deep and/or has falling pitch. In the elliptic reading, on the opposite, it must be indicated that the first conjunct is not yet terminated, that it has to be completed by some contextually expectable unit; this means that, on the traditional analysis, pitch is not allowed to go down; and this amounts to what is traditionally called "progreident intonation". Moreover, it seems that, in the elliptic reading, the first verb "kochte" and the second verb "aß" must somehow stand in a certain opposition, and this, too, is expressed by intonation, probably by what is most often called "contrastive stress". In the non-elliptic reading, there exists some contrastivity, too. It seems to hold between the two full verb phrases "kochte" and "aß ein passables Abendessen" rather than between the verbs; this corresponds to the often noted fact that a coordination in general needs both parallelity and contrastivity (cf. Lang, 1977). The intonation contrast between the two readings, then, is described by an opposition between "terminal" and "progreident" intonation of the last element in the first conjunct, and by a different position of the contrastive stress in the second conjunct. This description, though covering some facts, is unclear, misleading and wrong. It is unclear, because the central notions "terminal intonation", "progreident intonation" and "contrastive

stress" are either undefined or ill-defined, as I have shown elsewhere (Klein, 1980).

It is misleading because even in the elliptic reading, there may be different types of opposition between the two verbs; it is perfectly possible to have "Abendessen" *stressed*, and then, there is still a certain contrast between the two verbs; but it is of a different type which I find hard to describe. In any event, the intonational opposition changes, too, in this case (we already noted this fact in section 3.1). And it is wrong because even in the non-elliptic reading, the verb has no terminal intonation, at least not in the sense in which it is usually described. Quite to the contrary, the last syllable is rising, and this indicates progredient intonation. Hence, there is an obvious difference between the two readings, but it seems difficult to deal with it in terms of the established intonation analysis of German.

Let us turn now to another example. A question like

(106) War Blut auf oder unter dem Bett, Dr. Watson?

may be understood and answered in two ways. First in the sense of

(107) War Blut auf (dem Bett) oder (war Blut) unter dem Bett?

An appropriate answer, in this case, would be "unter", if there was some blood under the bed. The second interpretation is non-elliptic, it corresponds to a coordination of the prepositions, something like

(108) War Blut (auf oder unter) dem Bett?

Actually, there are some other possibilities, but it may be sufficient to consider just these two readings, of which the second one can be answered by "yes, there was" or "no, there wasn't". The first reading reflects a simultaneous application of E 1 — concerning "dem Bett" and E 2 — concerning "war Blut". Both readings are again discriminated by different intonation patterns. In the elliptic reading, both "auf" and "unter" have to carry some special stress, probably contrastive stress, whatever precisely this may be. The other reading allows for various contours, depending on whether (108) is the first question, whether there was a preceding question for something else on or under the bed before, or whether there was a preceding question concerning the existence of blood in some other place. In any of these cases, the intonation pattern is different from the one for the elliptic reading. I will not make any attempt to describe all of these various patterns in terms of traditional German intonation analysis.

As a third and last example, consider the sentence

(109) Mozart bewunderte Haydn und Beethoven.

Historically, this sentence seems wrong: Mozart did not admire Beethoven, he even did not know him; that is, we interpret this sentence in the sense of

(110) Mozart bewunderte Haydn und (Mozart bewunderte) Beethoven.

of which the second conjunct, reduced by an application of E 2 — or E 3, which amounts to the same in this case — is wrong. But (109) could also be the result of a different kind of ellipsis of E 3:

(111) Mozart bewunderte Haydn und Beethoven (bewunderte Haydn)

Taken in this sense, it is historically true. In fact, this interpretation and this kind of ellipsis is possible only with a very marked intonation pattern; both "Mozart" and "Haydn" must carry some "heavy stress" and "bewunderte Haydn" has to be something like "destressed", whatever this may be; (111) would be possible after a question like "Can you tell me two composers who admired Haydn?", that is, if "bewunderte Haydn" is thematic right from the beginning. Note that this question could also be answered by

(112) Mozart (bewunderte Haydn) und Beethoven bewunderte(n)  
Haydn.

that is, by applying an E 1-ellipsis, but then, we are faced with the problem of plural, again (cf. section 3.1 above). If we neglect this problem for the moment, the question is raised what the relation between (111) and (112) is and whether it is reflected in intonation, too.

These three examples suffice to demonstrate two points:

— Intonational structure plays a crucial role for the application of ellipsis rules. It discriminates between elliptic and non-elliptic readings of utterances as well as between different kinds of ellipsis, and it often determines whether an ellipsis rule is applicable at all.

— These intonational patterns are very complex, and a relatively detailed and reliable descriptive technique is necessary to grasp them.

Thus, more refined analyses of sentence intonation are a necessary prerequisite for a better understanding of how ellipsis works.

## 5. CONCLUSION

As has been pointed out already at the beginning of section 4, the rules for

regular ellipsis presented here are unsatisfactory in several respects. They can't be more than very first attempts to express the linguistically significant regularities of this relatively unexplored domain. "Wenn wir alle aufgestellten Regeln in diesem Sinne für hypothetisch halten, so erscheint uns zugleich wesentlich, daß damit grammatische Einsichten formal handhabbar, überprüfbar und in einem präzisen Sinne verbesserbar gemacht werden." (Bierwisch 1966)<sup>4</sup>.

## NOTES

<sup>1</sup> Throughout this paper, places where an element is understood but not expressed are usually marked by "\_"; if it seems to help understanding, several of these dashes are used, e.g., "\_\_\_\_\_" for three words left out.

<sup>2</sup> For example, the pitch of "Paket" could be lower; the example is taken from a larger utterance "ein großes Paket und ein kleines Paket", where there is an opposition between the two parcels.

<sup>3</sup> The following rules are based on a rather detailed analysis of clauses, VCs and NCs; adverbs and various particles have not been considered. For details, see Klein (1979).

<sup>4</sup> I wish to thank Simon Gairod, Robert Jarvella, Willem Levelt, and William Marslen-Wilson for helpful criticism.

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