THE MEANING OF FOCUS PARTICLES

A Comparative Perspective

EKKEHARD KÖNIG

ROUTLEDGE

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The Meaning of Focus Particles

Focus particles *(even, only, also, merely)* play an important role in English in various syntactic and semantic domains such as coordination, focusing, emphatic reflexives, concessive constructions, and quantification. The syntactic properties of these expressions pose numerous problems for current syntactic frameworks and the highly context-dependent and subjective nature of their meaning presents a challenge for semantic theories.

A ten-year study, this book presents a comprehensive analysis of the syntax, meaning and use of focus particles and related function words. It combines an in-depth analysis of English with a comparative study of many other languages, in search of cross-linguistic typological generalizations. The book also provides a historical perspective on focus particles by examining their diachronic sources and the relevant process of grammaticalization. The original meanings of the lexical items from which particles are historically derived illuminate the current meaning and usage of these expressions in English and the comparable regularities and patterns of variation in other languages.

The book will be of interest to a wide range of linguists. The meanings associated with focus particles in English combine both semantic and pragmatic aspects and so provide data of relevance to the current problem of locating the precise boundary between semantics and pragmatics. This will appeal to philosophers of language and semanticists of all persuasions. Specialists in English will find a new approach to the syntactic and semantic properties of a class of 'adverbs' whose analysis until now has been problematic. The comparative aspect is of great interest to language typologists, since this is the first time that a cross-linguistic typology of this pragmatic-semantic area has been proposed. For the historical linguist there are detailed discussions of grammaticalization processes, of correlations between historical sources and targets in focus particle development, and of the pragmatic-semantic interaction in historical change.

Ekkehard König is Professor of English and Linguistics at the Free University of Berlin. His books include *Adjectival Constructions in English and German* and *Form und Funktion,* as well as numerous articles. He is also joint general editor of Routledge's Germanic Linguistics series.

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This book represents one product of a research project on the meaning of so-called 'function words', 'minor lexical categories' or 'functional categories', which I have been pursuing, off and on, over a seven-year period. I started working on this book during a sabbatical semester spent at Stanford University (1981/2). Back in Hanover, my teaching and administrative duties, as well as other projects, left me little time to continue this work. So it was not until two years later, during two semesters spent as a fellow-in-residence at the Netherlands Institute of Advanced Study (N.I.A.S.) in Wassenaar, that I found sufficient time to make further progress. A pre-final draft of the book was written during the winter semester of 1986/7, but as a result of the inspiration provided by two detailed reviews received in the autumn of 1988, substantial revisions had to be made. Over the years, the book has undergone several revisions since the first draft. Originally planned as an investigation of the relevant phenomena in English and German, it gradually developed into a more comprehensive comparative study.

After a brief discussion of the role of focus particles in various grammatical domains (Chapter 1) and an analysis of their basic syntactic properties (Chapter 2), a general framework for their semantic analysis is developed in Chapter 3. On the basis of this framework, individual groups of particles are investigated in detail in subsequent chapters. In each chapter a detailed discussion of the relevant phenomena in English and German provides the foundation for a comparative discussion that also includes data from many other languages.

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Ekkehard König

1
Introduction

1.1
SCOPE AND GOALS OF THE PRESENT STUDY

The aim of the present study is to present a detailed analysis of the syntax, meaning and use of words like *even, also, only, too* in English, German and several other languages.[1] Given that there is only a very limited inventory of such expressions in English or any other language and that their contribution to the meaning of a sentence does not seem to be all that significant, it may appear at first sight hardly justified to devote a whole book to the analysis of these expressions. Moreover, such a book might seem to be of mere philological interest at best. The fact, however, that these expressions have played an important role in discussions of both language philosophers and linguists in the last twenty years or so and that many articles have been written on this subject belies this view. What is it, then, that makes these expressions so interesting?

There are, essentially, two general properties which have aroused great interest in focus particles and which motivated me to write this book, either of which can be illustrated by a list of more specific points:

(a) Focus particles play an important role in the development and formal make-up of a variety of constructions and are related to various semantic domains. There are, in other words, various synchronic and diachronic connections between focus particles and other central semantic processes.

(b) Focus particles present a challenge to current syntactic and semantic theories. The following more specific points illustrate and further substantiate these two claims:

(a1) There is an interesting tie-up between additive focus particles and coordination in many languages. Coordinating conjunctions like E. *and* and additive particles like E. *also, too* often

correspond to the same lexical item in other languages. Latin and Malayalam (Dravidian) exhibit the relevant connection quite clearly: Latin *et* and Malayalam *-um* are both used to coordinate phrases and sentences, but may also be used in the sense of E. 'also, too, even'.

(a2) Additive particles frequently combine with interrogative quantifiers ('interrogative pronouns') to form so-called 'indefinite pronouns' ('free-choice quantifiers') like E. *whoever.* G. *wer auch immer* 'who-also-always', Dutch *wie ook* or Jap. *daremo* 'who-also' and Seneca *w□: tohkwah* 'when-also' ('whenever') are cases in point (cf. Coyaud and Aït Hamou, 1976).

(a3) Additive particles like E. *also, even* frequently show up as components of concessive connectives. *Even though, even so* in English, F. *quand même* and G. *obschon, ob-gleich, wenn ...auch* illustrate this connection (cf. König, 1988)

(a4) Both *only* and *even,* as well as their counterparts in other languages, mark two interesting types of conditionals. When *only* is prefixed to a conditional marker, the resultant sentence expresses a necessary condition:

(1) a. If p, then q.
b. Only if p, q.

The tie-up between *only* and the distinction 'sufficient vs. necessary condition' is, however, much more general than this. The addition of *only* may also have the effect in question in sentences not overtly marked as expressing conditions. Compare the following two examples where the first one could be analysed as expressing a sufficient condition and the second as expressing a necessary one:

(2) a. A BA is sufficient for this job.
b. Only a BA is sufficient for this job.

Interestingly enough, this relationship also works the other way round: Some sentences express a necessary condition without *only,* but a sufficient one when *only* is inserted:

(3) a. A BA is required for this job. (necessary condition)
b. Only a BA is required for this job. (sufficient condition)

(a5) Conditional antecedents in which the restrictive particle *only* follows the conditional marker and is part of the antecedent express wishes and function as a specific utterance type in a wide variety of languages:

(4) a. If only he hasn't told him.
b. (G.) Wenn er es ihm nur nicht gesagt hat.

In some analyses, the conditional connective and the particle are regarded as markers of an 'optative' mood.

(a6) There is an interesting tie-up between restrictive particles and adversative conjunctions in many languages. E. *but* and Dutch *maar,* for example, are used both as restrictive focus particles and as adversative conjunctions:

(5) a. He is but a child.
b. He wanted to do it, but he didn't find the time.

(a7) There is an interesting relationship between emphatic reflexives or emphatic assertions of identity and additive scalar particles like E. *even*. The following German examples illustrate this affinity (cf. Edmondson and Plank, 1978; Plank, 1979b):

(6) a. Selbst der Präsident kam.
'Even the President came.'
b. Der Präsident kam selbst.
'The President came himself.'

(a8) Finally, focus particles interact with the focused part of the sentence they occur in, a fact which is responsible for the label used in this and various other studies for this subclass of adverbs. The contributions made by *even* to the meaning of the following sentences clearly differ, as a result of the interaction of the particle with different foci:

(7) a. John even insúlted Mary,
b. John even insulted Máry.

Clearly, then, focus particles are by no means a marginal phenomenon in the structure of a language. That they present an interesting challenge to current syntactic and semantic theories is shown by the following points:

(b1) In spite of the essentially pragmatic nature of the meaning of focus particles, there are close connections with and parallels to truth-conditional aspects of meaning. In many respects, focus particles behave like generalised quantifiers and the analysis of their meaning crucially involves the notion of scope. Consider the following two pairs of

examples as illustration of this quantifier-like behaviour. When such particles are added to a sentence containing a pronoun such as (8)a., these pronouns

lose their anaphoric character and function as variables. And a reversal in the linear order of focus particles frequently correlates with a change of meaning (cf. (9)):

(8) a. Fred regrets that he lost.
b. Only Fred regrets that he lost.

(9) a. Even Fred read only *Syntactic Structures*.
b. Only *Syntactic Structures* was even read by Fred.

(b2) Focus particles also present a challenge to truth-conditional theories of meaning in so far as their introduction into some sentences does not seem to affect the truth conditions in any way (cf. (10)), whereas in others the presence of a focus particle makes a clear difference (cf. (11)):

(10) a. Fred came to the party.
b. Even Fred came to the party.

(11) a. I'm distressed because I can't remember my own phone number.
b. I'm distressed because I can't even remember my own phone number.

In (11)a. the distress has a single cause, whereas in (11)b. it has a multiple cause, the forgetting of a whole lot of important information.[2]

(b3) Focus particles belong to the so-called 'minor', 'functional' or 'non-lexical' categories whose integration into a syntactic description presents great problems for current syntactic frameworks (cf. Chapter 2).

(b4) A number of authors (e.g. Reinhart, 1983) have noted that *even* and *only* interact intimately with the Binding Conditions formulated in Chomsky (1981). The following two examples show that both *himself* and *him* can be coreferential in a simplex sentence with focus particles:

(12) a. Only Felix_1 voted for himself_1
b. Only Felix_1 voted for

The fact that both reflexives and pronouns can be coreferential in such sentences seems to be related to the fact that they mean something different in such sentences. Why do particles permit such violations of Chomsky's condition B: 'pronouns must be free in their minimal category'?

(b5) Focus particles and related expressions (cf. Chapter 8) are extremely context-dependent, vague and subjective in their

meaning and it is all too easy to mistake a specific aspect of the context for the meaning of the particle itself. To capture this context-dependence, vagueness and subjectivity poses serious problems for any semantic theory.

(b6) Despite clear parallels in the lexical distinctions drawn by many languages, focus particles and related expressions are difficult to translate from one language into another. Moreover, native speakers have no clear intuitions about or awareness of the relevant aspects of meaning.

The present book is both a descriptive and a theoretical study. Even though its orientation will be to a large extent a descriptive one, all of the problems and points listed above will be addressed and specific attention will be given to the theoretical problems raised by particles. In contrast to earlier contributions to the analysis of focus particles, the present study is a comparative one and combines the goal of giving an in-depth analysis of a certain area of grammatical and lexical structure in English and German with the one of making some cross-linguistic observations and generalisations. Starting from a detailed comparison between English and German, I will include data from a wide variety of languages into my analysis. Such a cross-linguistic perspective will help us, I think, to see the general properties of focus particles more clearly and to separate general from language-specific facts. It may, furthermore, help us to identify some interesting issues, problems and solutions that go unnoticed if an investigation is confined to a single language.

The main emphasis of this study will rest on the meaning of particles. Thus, only one chapter of the book will deal with problems of syntactic analysis. The rest is dedicated to a discussion of semantic and pragmatic issues and investigates *inter alia:* the general parameters required for an analysis of the meaning of focus particles, lexical differentiations typically found in languages, lexical subsystems, semantic relations between particles, typical interpretative enrichments in certain contexts, different ways of marking the scope, etc.

In addition to the synchronic analysis of focus particles, the book also includes a historical perspective. In Chapter 8, I will try to shed some light on the meaning and function of these expressions by investigating their etymology and historical development from other categories.

Finally, two possible shortcomings of the book should be mentioned. Owing to the comparative orientation and wide scope that this book has, it cannot possibly meet the standards of explicitness and formal precision set by investigations of small fragments of a single language, such as Jacobs (1983) or Rooth (1985). Like other comparative and cross-linguistic studies, I will often have to resort to an informal analysis in cases where the relevant phenomena have already been described in more rigorous terms for a specific language. Moreover, I will often present a survey of phenomena and problems rather than detailed solutions, but I hope that the book will make up in scope and coverage for what it lacks in explicitness and formalisation.

Secondly, I have used the term 'comparative' rather than 'cross-linguistic' in the title to indicate that the basis for the comparison is rather restricted and includes primarily European languages. Only some parts of the book are based on a larger and, thus, more interesting sample. Furthermore, all comparative statements that go beyond the few European languages I am familiar with will have to be somewhat superficial. Nevertheless, I hope that this book will not only make a contribution to the description of the languages investigated, but that it will also provide an analytical tool for the description of the relevant area in future reference grammars[3] and that it will raise some interesting questions that can fruitfully be pursued in further comparative and cross-linguistic studies.

1.2. BACKGROUND OF RESEARCH

Words like *even* and *only* as well as their counterparts in other languages have received a great deal of attention in the last twenty years both from philosophers and from linguists. In philosophical analyses, the meaning and function of such words have mainly been discussed in connection with semantic analyses of conditionals and with conditional logic. *Only* and *even* are regarded as markers of two interesting types of conditionals:

(13) a. Only if you give him some money will he mow the lawn for you.
b. Even if you give him some money, he won't mow the lawn for you.

Only if is often analysed as the converse of *if…then* and thus as a marker of necessary conditions (cf. Quine, 1962:41; McCawley, 1981:49ff.).[4] *Even,* on the other hand, has played an important role in discussions concerning the negation of conditionals, as well as in analyses of many arguments based on conditionals (cf. Stalnaker, 1969; Mackie, 1973; Bennett, 1982). In spite of their formal relatedness to ordinary conditionals, sentences introduced by *even if* are not always regarded as a species of conditionals. It is generally acknowledged, on the other hand, that an answer to the question whether sentences of type (13) should be regarded as conditionals or not has important consequences for a semantic theory of conditionals.

In linguistic discussions of the late 1960s and early 1970s, *even, only* and words with similar syntactic and semantic properties have figured prominently in studies demonstrating the existence of 'presuppositions' and other aspects of non-truth-conditional meaning. *Even, only* and related words proved to be an interesting testing ground for theories opposing a pragmatic concept of presuppositions to a semantic one, for theories concerned with the projection problem (i.e. the problem of how the presuppositions of a sentence are inherited from those of its components), as well as for discussions trying to delimit pragmatics from semantics (cf. Horn, 1969; Fraser, 1971; Green, 1973; Wilson, 1975; Kempson, 1975; Karttunen and Peters, 1979; etc.). The interest in non-truth-conditional aspects of meaning, however, was not the only motive for studying *even, only* and related grammatical words. Another important impetus for the study of such words was the attempt to extend semantic analyses to members of minor lexical categories, i.e. to words which have no extension, which are highly abstract and context-dependent in their meaning and thus have a wide range of apparently unrelated uses (cf. F. and L.Karttunen, 1977; Finnis, 1977; König, 1977; Ariel and Katriel, 1977; Abraham, 1980; Brausse, 1983; etc.). Even though this was not their primary concern, some of these studies of individual particles have identified some general syntactic and semantic properties of focus particles: the variability of their syntactic position, their quantifier-like properties and their function of interacting with the focus of a sentence. Many of the studies mentioned so far show that particles (or 'adverbs') like E. *only, even, too* may occur in many different positions in a sentence and that these different syntactic positions correlate with systematic differences in the accentual pattern and meaning of a sentence. McCawley (1970), Keenan (1971) and F. and L.Karttunen (1977) were the first to draw attention to the quantifier-like behaviour of *only* and *even*.

A further stimulus to investigate the syntax and meaning of focus particles came from work done on the focus-background organisation of a sentence: the selection of a focus, focus marking and focus interpretation. As was already mentioned above, expressions like *even, only* and *also* are always associated with a focus in a sentence and their interaction with the focus-background organisation of a sentence is an essential part of their analysis. In Jackendoff (1972), a general discussion of focus structure is combined with an analysis of focus particles. And although focus particles such as *even* are often only included in such investigations, because 'the presence of that word sharpens up intuitions about focus as nearly nothing else can' (Ladd, 1983:159), general discussions of focus structure, focus marking and focus interpretation in structures without focus-sensitive expressions (cf. Selkirk, 1984; Ladd, 1983; Gussenhoven, 1984; Rochemont, 1986; Jacobs, 1988) clearly provide an important background for this book.

The problem of identifying the general syntactic and semantic properties of focus particles in English and German is the central concern of some further recent additions to the literature on this subclass of grammatical words. In

Altmann (1976, 1978), the general syntactic properties of focus particles in German are explored. In König (1977, 1981) an attempt is made to specify the semantic type of focus particles by demonstrating that all members of this class in German can be described in terms of a few semantic parameters. The newest reference grammar of English (Quirk *et al.,* 1985) recognises 'focusing subjuncts' as a specific subclass of adverbials in English, and discusses some syntactic and semantic properties that justify using this functional label as a convenient abbreviation. A more detailed syntactic analysis of a representative subclass of such elements is given in Ross and Cooper (1979) within the framework of the *Aspects* model of transformational grammar. Studies of both the syntax and the semantics of a subclass of focus particles can be found in the descriptive study by Taglicht (1984). Taglicht discusses the distributional properties and meaning of *only, also, too,* and *as well* in connection with the general phenomenon of focal structure and focus marking in English.

Very important theoretical contributions to the semantic analysis of focus structure and focus particles have been made in the last ten years by Karttunen and Peters (1979), Jacobs (1983), Rooth (1985), von Stechow (1988), Fillmore, Kay and O'Connor (1988), and Kay (1990). In the first four of these contributions, the frameworks of formal semantics developed by Montague and by Cresswell (1973) are extended in suitable ways in order to accommodate the analysis of the relevant phenomena. The differences between these theories are subtle and complicated and a detailed discussion of these differences and what they mean for the expressive power of these theories cannot be offered in this book. The articles on *let alone* and *even* by Fillmore, Kay and O'Connor (1988) and Kay (1987) are remarkable, among other things, for their discussions of the semantics-pragmatics interface. It is argued in both articles that these two particles interact with the Gricean maxims of Relevance and Quantity. In fact, Kay points out that their scalar properties offer a clearer insight into the nature of the maxim of Quantity than other scalar phenomena.

A radical pragmatic approach to the analysis of focus particles is offered in Blakemore (1987). In her relevance-theoretic approach to the analysis of focus particles and conjunctional adverbs, the primary focus of her analysis, Blakemore argues that these adverbs are best analysed as metapragmatic instructions to process the utterance content of the containing sentence in particular kinds of contexts. In other words, function words of this kind identify and make accessible those contextual assumptions which have to be brought together with new assumptions in order to derive new contextual implications. It will be shown below that Blakemore's theory offers interesting insights into the meaning of conjunctional adverbs and modal particles, but is of limited significance as far as focus particles are concerned.

Finally, I should also mention that a large number of descriptive studies of focus particles in various languages have appeared in the last few years (e.g. van der Auwera and Vandeweghe, 1984; Manzotti, 1984; Zierer, 1984; Välikangas,

1982), all of which provide useful information for a comparative study, but are too numerous to list here exhaustively.

2
Syntax

2.1.
GENERAL SYNTACTIC PROPERTIES

Lexical elements like E. *even, only, also, too* or *just* and their counterparts in many other languages are traditionally categorised as adverbs. Some recent work on the syntactic and semantic properties of these elements, especially the comprehensive studies on English and German mentioned in the preceding chapter, have shown that these elements have a large number of properties in common, that the similarities in their behaviour far outweigh the differences and that they should therefore be regarded as a special subclass of adverbs, 'function words' or 'syncategorematic words'.

One of the most striking properties of such focus particles is their positional variability. They may occur in several positions in a sentence and, as it were, move right through it:

(1) a. Only FRED could have shown the exhibition to Mary,
b. FRED ónly could have shown the exhibition to Mary,
c. Fred could only have SHOWN the exhibition to Mary,
d. Fred could have shown only THE EXHIBITION to Mary,
e. Fred could have shown the exhibition only to MARY.

The preceding examples also illustrate another general property of focus particles, namely their interaction with the focus structure of a sentence. In (1), different positions of *only* correlate with different locations of the nuclear tone (intonation centre, pitch accent, sentence stress) and different interpretations of the relevant sentence. Depending on their position and that of the nuclear tone, focus particles 'relate to' different parts of a sentence. We will show below that this can mean one of three things (cf. Jacobs, 1983:8ff.), but only the first property is relevant in the context of the present discussion:

(2) a. Focus particles focus on a specific part of a sentence.

b. Focus particles combine with a specific constituent,
c. Focus particles have a specific semantic scope.

The focus structure of a sentence, which roughly results in a partitioning of the sentence into a focused or highlighted part and a backgrounded part, is now generally assumed to be one aspect of its grammatical structure, which has both a phonological and a semantic interpretation.[1] Formally, this structure is typically, though not exclusively, marked by intonation: by intonational phrasing (tonality), i.e. the division of a sentence into one or more tone groups (intonational phrases) and by 'tonicity', i.e. the placement of the intonation centre (nuclear tone). Prosodic prominence, however, does not clearly identify and delimit the focus of a sentence, which may comprise more than the word carrying the nuclear tone. In (3), for example, the direct object, the VP, or the whole sentence could be the focus, depending on the question the sentence provides an answer to:

(3) John washed the CAR.
(4) a. What did John wash?
b. What did John do?
c. What happened?

Since the focus structure of a sentence is a crucial factor in the definition of 'well-formedness' or appropriateness in discourse, certain tests are used for determining the potential foci of a given sentence in context: sentences with a given nuclear tone are embedded in a context and judgements are made as to the appropriateness of the resultant discourse. *Wh*-interrogatives like (4)a.–c. are one of the tests used for that purpose. What they are meant to capture are the conditions on the appropriateness of question-answer pairs. With regard to this test, the focus of a sentence can be defined as that part that corresponds to the *Wh*-phrase in an interrogative to which it provides an appropriate answer. In the example given above, the nuclear tone on *car* may mark three different focus structures, depending on the question that (3) answers. To account for such cases of ambiguous focus marking, various percolation rules have been formulated in the literature, which allow a feature [+focus] to percolate to a dominating node. Whether it is only the constituent structure or also the argument structure that plays a role in such focus assignment rules is a matter of some controversy.

That nuclear tone (pitch accent) and interpretation as focus are systematically related but distinct notions is not only shown by the preceding discussion. In contrast to what is assumed in earlier discussions of these phenomena, prosodic prominence is neither a necessary nor a sufficient condition for interpretation as focus (Rochemont, 1986:19ff.). *Wh*-interrogatives in languages such as German and English provide clear and compelling arguments for this view. On the basis of semantic and cross-linguistic syntactic considerations, the *wh*-phrase has to be

analysed as focus in such sentences. But it is a well-known fact that it is not the *wh*-phrase that carries the nuclear tone in such constructions in their typical, unmarked use:

(5) a. What would you like to drink?
b. Where do you go?

Examples such as these show that some pitch accents are not focus related and that the focus need not be marked by a nuclear tone.

It is this focus structure of a sentence that focus particles interact with both syntactically and semantically: their position in a sentence depends to a certain extent on that of the focus, and the contribution they make to the meaning of a sentence is equally affected by the selection of a focus. This property of being sensitive to and interacting with the focus structure of a sentence has led to the labels that are typically used for this class of adverbs, but focus particles are by no means unique in this respect. Certain subclasses of verbs, especially attitudinal verbs (e.g. *regret, doubt*), sentence adverbs *(probably, surprisingly, presumably),* metalinguistic negation (*not…but;* cf. Horn, 1989:362ff.) and certain adjectives (e.g. *very, mere*) also seem to interact with the focus structure (cf. Jacobs, 1988:94f.; Koktova, 1987). The following pairs of sentences clearly differ in their meaning:

(6) a. I regret that GEORGE is dating Susan. (I would have liked to go out with her myself.)
b. I regret that George is dating SUSAN. (This means that I have to invite him, too.)
(7) a. Surprisingly, George is RUNNING to Brooklyn,
b. Surprisingly, George is running to BROOKLYN.

Whenever a focus is associated with some operator, as in (1), (6) and (7), we will call it a 'bound focus' or the 'focus of that operator or particle'.[2] Jacobs (1988: 95; 1990) has argued that every focus in a sentence should be analysed as the focus of some operator and that in addition to such overt 'focus inducers' as focus particles, attitudinal verbs or sentence adverbs, we should postulate covert focus inducers such as interrogative or declarative operators. There is some evidence that illocutionary operators do indeed interact with the focus structure of a sentence. In languages in which yes-no interrogatives are distinguished from declaratives not through word order, but through the addition of certain particles, these particles are often added to the focused constituent. The following examples are from Russian and Finnish:

(8) a. Doma li mama?—Is mother HOME?
b. Mama li doma?—Is MOTHER home?
(9) a. Saksaako Kari puhuu?—Is GERMAN what Kari speaks?

b. Kariko puhuu saksaa?—Is it KARI who speaks German?
c. Puhuuko Kari saksaa?—Does Kari SPEAK GERMAN? speak (-Question) Kari German

Since we are only concerned with the interaction of focus particles and focus structure, we will not discuss Jacob's Relational Focus Theory any further.

In view of what was said about the relationship between prosodic prominence and interpretation of focus above, it is not surprising that in most cases the focus of a particle is not clearly identified by a nuclear tone either. To determine the exact extension of a particle focus, specific tests have to be used which differ for certain subclasses of particles. In the case of sentences with *only* and related particles, sentences with quantifiers provide a useful diagnostic context:

(10) a. John did all kinds of things.
b. No, he only bought A BOOK.
(11) a. John bought all kinds of things,
b. No, he only BOUGHT A BOOK.

Sentences with focus particles also provide examples of non-focus-related uses of pitch accents. In examples like the following, the particle follows its focus and carries the nuclear tone:

(12) FRED is coming, tóo/as wéll/álso.

On the other hand, focus particles may contribute to the exact identification and delimitation of their focus. Certain positions of particles correlate more or less clearly with specific positions of their foci. Focus particles are thus one of the formal exponents of focus structure, in addition to prosodic prominence, morphological markers, word order and specific syntactic constructions which consistently identify the focus. In English, various movements to the left identify the initial phrase as focus and various movements to the right identify the final phrase as focus (cf. Rochemont, 1986:109):

(13) a. JOHN I quite like, HIS WIFE I don't,
b. It was THE KEY that he lost,
c. And FIGHT he would,
d. What he lost was THE KEY.
e. Staring me in the eye was A GREEN-EYED MONSTER.
f. Less fortunate are the people WITHOUT JOBS.
g. Next to the fireplace stood A LARGE OLD SOFA.

Positional variability and interaction with focus structure seem to be the most distinctive properties of focus particles. There are, however, also a few minor

properties that seem worth mentioning at this point. In contrast to the members of other subclasses of adverbs, the same focus particle can occur twice in a sentence. Such sentences are extremely rare and in some cases (e.g. *even*) very specific contexts are required to make such a sentence acceptable, but examples like the following are certainly intelligible:

(14) a. Only HONECKER admires only HIMSELF.
b. Even MY SLOWEST STUDENT got even THE HARDEST PROBLEM, (cf. Kay, 1990)
c. Ausgerechnet AM MONTAG kommt mich ausgerechnet FRITZ besuchen.
'On Monday of all days Fred, of all people, is coming to see me.'

Coordination is normally assumed to be governed by the constraint that only members of the same category or subcategory can be conjoined (cf. Gazdar, 1981). The fact that focus particles can be conjoined, as in the following German examples, thus justifies assigning them to a separate subcategory.[3]

(15) a. Erst und nur in der Renaissance…
'Only and not until the Renaissance…' <
b. Auch und gerade wirtschaftliche Probleme…
'Also and especially economic problems…'

Other syntactic criteria that could be used to identify and characterise a class of focus particles only apply to specific languages and are probably the result of an interaction of basic properties of such elements and certain language-specific constraints. They will therefore not be discussed at this point.

On the basis of the syntactic criteria discussed so far and on the basis of semantic criteria to be discussed in the next chapter we can assign the following elements of English to the class of focus particles:

(16) English: *also, alone, as well, at least, even, especially, either, exactly, in addition, in particular, just, merely, only, let alone, likewise, so much as, solely, still/much less, purely, too*.

The corresponding class in German comprises at least the following elements:

(17) German: *allein, auch nur, ausgerechnet, ausschließlich, bereits, besonders, bloß, einzig, eben, ebenfalls, erst, gar, genau, geschweige*

denn, gerade, gleich, gleichfalls, insbesondere, lediglich, (nicht) einmal, noch, nur, schon, selbst, sogar, vor allem, wenigstens, zumal, zumindest.

Both groups contain a few complex expressions, which can be analysed as having been rank-shifted to the class of focus particles. Moreover, we could have added to each group a number of marginal cases (like E. *precisely, mainly, notably, simply, in addition,* etc.) which meet only a few of the relevant criteria. But even if we do not include those marginal cases, our classes of focus particles are by no means homogeneous ones. Each class contains prototypical members which meet many or most of the relevant criteria. But there are clear differences even between those cases that we might want to consider as prototypical or as belonging to the core class: in contrast to E. *even (just, also), too* may only precede the focused element under very specific conditions (cf. Taglicht, 1984: 187f.). And in contrast to *even,* post-focus *only, also* and *too* carry the nuclear tone (cf. Ross and Cooper, 1979:370):

(18) a. I saw FRED tóo/álso/ónly,
b. I saw FRED, even.

Similar syntactic differences can be observed among the expressions listed in (17) for German. The category 'focus particle' is thus no more than a convenient abbreviation for a number of syntactic and semantic properties. The relevant group has some proto-typical members, which have a great deal in common and some marginal ones, which also share properties with other classes or subclasses of lexical items. The next chapter will show that semantic criteria are more important for the classes established in (16) and (17).

In contrast to English, iteration of particles is generally possible in German, even if combinations of more than two particles seem to be extremely rare. *Sogar,* in particular, may combine with a wide variety of other particles, which it invariably precedes. But many other combinations are possible too, as is shown by the following list:

(19) *sogar schon, sogar erst, sogar nur, sogar auch, sogar bloß, schon allein, sogar noch nicht einmal, ausgerechnet auch, auch noch, auch nur, gerade auch,* etc.

In English, *just* may be combined with either *exactly* or *precisely* (cf. Quirk *et al.,* 1985:608/b/) and the combination *only just* is attested in EME:

(20) If we are to give our advice, your best way will be to go upon the accounts and the alliances. But if we must only just give money and nothing else, then go upon the speech, (cf. Nevalainen, 1982:63)

Other combinations do not seem to be possible, however. For the combinations that do occur in either English or German, several analyses are possible: two particles may simply function as a complex particle with a specific, idiomatic meaning; the second particle may be part of the focus and in the scope of the one preceding; or the two particles may be associated with the same focus, but with different scope. It will be shown in subsequent chapters that all of these possibilities are actually attested.

Another interesting combinatorial property of focus particles is the tendency for some of them to co-occur in adjacent clauses. The following sentences are examples of such paired foci constructions.

(21) a. There is no chance she's even gonna LOOK at me, let alone REMEMBER my NAME. (cf. Fillmore, Kay, O'Connor, 1988:525)
b. Not only did he REFUSE TO PAY HIS DEBTS, he also INSULTED ME.

Finally, we may note that many of the expressions listed in (16) and (17) have other uses, too. In both English and German, some of these expressions may also be used as conjunctional adverbs. Particles with that function usually precede the clause with which they combine:

(22) a. (I would like to come.) Only, I have not got the time,
b. Also, I cannot really leave my children alone.

Another use that the expressions in (16) and (17) may have is that of 'modal particle'. Both 'extensions' in the use of focus particles can be observed in a wide variety of languages. Since there is good evidence for the view that some modal particles historically derive from focus particles as a result of a process of bleaching, I will return to the question of the relationship between different uses of the function words under discussion in a separate historical chapter.

2.2.
SOME CROSS-LINGUISTIC OBSERVATIONS

After this discussion of the most basic syntactic properties of focus particles we will now turn to more specific questions of their syntactic analysis: what are their combinatorial properties and to which category should they be assigned in a formal description? What are the constraints on their placement relative to that of their focus? Before we consider some of the answers that have been given to this question in analyses of English and German, we will first take a brief look at some facts that emerge in a cross-linguistic study of this question.

Given their close association with a focused element in a sentence, one might want to introduce focus particles as co-constituents of their foci. In English and German all types of phrases (NP, VP, AdjP, PP), but also adverbs and numerals

can function as foci of a particle. Verbs seem to be special in so far as not only their maximal projections, but also units of a lower level may be selected as focus. One way of introducing focus particles would thus be to formulate rule schemata that allow configurations like the following (cf. Bayer, 1988):

(23) a. $[\text{PRT} + \text{XP}]_{\text{XP}}$ or $[\text{XP} + \text{PRT}]_{\text{XP}}$

b. $[\text{PRT} + \text{V}^{\text{n}}]\text{v}\ (\text{O}<\text{n}<\text{max})$

An analysis along these lines is, implicitly or explicitly, assumed in many descriptions of the relevant expressions. It seems particularly appropriate for languages where focus particles are enclitic to the word or phrase they focus on.[4] In Turkish, for example, *de* 'too' follows and exhibits vowel harmony with its focus (cf. Lewis, 1967: 206):

(24) a. oraya ben de gittim. (there I too went) 'I too went there.'

b. ben oraya da gittim. 'I went there too (as well as elsewhere).'

c. ben oraya gittim de. 'I also went there.'

The same phenomenon can be observed in Finnish, where *-kin* 'too' and *-kaan,* its counterpart in negative sentences (=E. *either*), are added as clitics to their focus and where *-kaan* is also subject to rules of vowel harmony (cf. Karlsson, 1983):

(25) a. Minäkin olen hankkinut auton.
'I, too, have got a car.'

b. Olen hankkinut autonkin.
'I have got a CAR, too.'

(26) a. En ole hankkinut autoakaan.
'I haven't got a CAR, either.'

b. Minäkään en ole hankkinut autoa.
'Neither have I got a car.'

In Japanese, focus particles like *mo, made, sae, sure,* etc. also follow the element they focus on and the close syntactic link between a particle and its focus is reflected by the fact that case markers like *-ga* and *-o* as well as the topic marker *wa* are usually dropped when a nominal element is focused on (cf. Martin, 1975: 66ff.):

(27) a. Taroo-ga sakana-o tabemasu.
(Taroo-Subj. fish-Obj. eats)

b. Taroo-mo sakana-o tabemasu.

'Taroo, too, eats fish.'

Other examples of languages where at least some particles are added to their focus as clitics are Tibetan, Mongolian, Quechua, Zulu, Korean, Amharic, Fore (Papuan) and the Dravidian languages Tamil, Malayalam and Kannada.

The traditional categorisation of focus particles as 'adverbs' suggests a very different picture from the one presented so far. Focus particles could also be assumed to be in construction with a sentence (like sentence adverbs) or at least with a major constituent of the sentence such as the VP. This analysis seems to be well motivated for languages where focus particles occur in positions typically reserved for adverbs, regardless of their focus. Such a situation can be found in a variety of European languages, where focus particles often also have the typical adverbial suffixes, e.g. *-ly* in English or *-ment* in French.

In English, focus particles are 'most frequently placed at M', i.e. the position after the first auxiliary verb and/or before the main verb, regardless of the position of their focus. In a sentence like (28) any phrase (NP, PP, VP) or the verb could be selected as focus (cf. Quirk *et al.* 1985:605f.):

(28) You could even leave her car at the airport for a week.

In many other European languages focus particles behave similarly and are by no means restricted to a position adjacent to their focus.

In Chinese, to give an example of a non-European language, focus particles like *ye* 'also', *zhi* 'only' and *lian…dou* 'even' only occur in the preverbal position, irrespective of the position of their focus (cf. Paris, 1989; Chao, 1968: 780ff.). In examples like the following, the position of the focus is not clearly identified through the position of the particle and several translations are possible:

(29) a. Wo zhi xie shu.
(I only write book)
'Only I write books/I write only books', etc .

b. Wo ye xie shu.
(I also write book)

If the subject is to be clearly marked as focus a different (periphrastic) construction has to be chosen:

(30) Zhi you wo xie shu.
(only have I write books)
'Only I write books.'

If, however, an object is moved to the left, away from its normal position after the verb, only that object may be chosen as focus:

(31) a. Ta lian xin dou bu hui xie.
(she even letter all not know write)
'She cannot even write a letter.'
b. Zhang San, cha ye mai le.
(Zhang San tea also buy Perf.)
'Zhang San also bought THE TEA.'

The preceding discussion is not meant to suggest, however, that languages can be neatly divided into those that support an analysis of focus particles as co-constituent of a focused part and those that support an analysis as sentence adverbs. The typical situation in fact is that arguments for both analyses can be given for each individual language. In most languages that I have investigated, the 'semantic role' that focus particles play in a sentence is also reflected in their syntax. At least some of the relevant expressions may occur in the position adjacent to their focus, either as clitics or as independent words. At the same time, however, these and other expressions that one would want to consider as focus particles may be very mobile and exhibit a behaviour characteristic of sentence adverbs. Let us again look at a few examples. In Finnish, *-kin* and *-kaan* 'also, either' are clitics, *myös* 'also', however, behaves more like an adverb. In French, a nominal focus of *aussi* is often repeated in pronominal form and can be assumed to form a constituent with this particle:

(32) a. Albert était seul, lui aussi.
(Albert was alone, he too)
b. Sa femme, Michèle, elle non plus, ne comprend pas…
(*France Soir,* 22 February 1986)
(his wife, Michèle, she too, does not understand)

On the other hand, *aussi* may also occur in sentence-final position just like other adverbs:

(33) ELLE a vu les occupants aussi.
'She saw the people inside the car, too.'

In Diyari (Australia), to give another example, *windi* 'only' need not clearly identify its focus through its position. In such potentially ambiguous cases, the post-inflectional suffix *-lu* can be attached to the focus (cf. Austin, 1981:172). Finally, we will see in the following two sections that strong arguments for both of the two syntactic analyses mentioned above can be found in English and German.

There is another 'irregularity' in the syntax of focus particles that should also be mentioned in this context. In a wide variety of languages 'additive' particles like E. *also,* and *too* follow their focus as clitic or as a separate word, whereas 'restrictive' particles like E. *only* precede their focus and are less likely to require a position adjacent to it. In Bengali, for example, the clitic *-o* 'too' is added to its focus, whereas *k'ali* 'only' usually precedes and has the status of a separate word:

(34) a. Rita-o Sita-ke dek'et'e.
(Rita too Sita-Obj. met)
b. Rita Sitake-o dek'et'e.
(Rita Sita-Obj.-too met)

(35) a. K'ali Rita Shake dek'et'e.
(only Rita Sita met)
b. Rita k'ali Sitake dek'et'e.
'Rita met only Sita.'

A similar situation can be found in Hungarian, where *is* 'too' follows its focus whereas *csak* 'only' precedes it:

(36) a. PETER is jött.
'Peter also came.'
b. Ha PETER is jönne…
'If Peter comes too
c. Ha PETER JÖNNE is…
'Even if Peter comes…'

(37) Csak PETER jött.
'Only Peter came.'

Further examples of such an asymmetry in the syntactic behaviour of additive and restrictive particles can be found in Turkish, Lezgian, Finnish, Amharic, Margi, Persian, Tarascan and Fore. Limiting or restrictive suffixes seem to be quite rare. Only four of the languages upon which this study is based have such restrictive suffixes ('limiters') in addition to suffixes with an inclusive meaning: Tarma Quechua *(-la),* Tarascan *(k'u),* Mokilese *(-oar),* and Manam *(-la, -baya)*. And in Maasai, too, both inclusive and exclusive particles follow their focus. So it seems that if only one group of particles follows their focus, it is invariably the additive group.

2.3. CONSTRAINTS ON THE PLACEMENT OF FOCUS PARTICLES

2.3.1. English

Against the background of this general discussion, we can now investigate the specific situation in English. On the basis of syntactic criteria alone, focus particles seem to be a particularly heterogeneous class in English. This is the impression that emerges even if only a small subset of the expressions listed in (16) is examined. Most syntactic studies of focus particles in English are concerned with one, two, or maximally five items from the list given in (16) and even such a restricted perspective often leads to the pessimistic conclusion that 'each focus marker has its own grammar' (Taglicht, 1984:188).[5]

A description of the possible syntactic positions of focus particles in a language has to be formulated both in terms of structural positions within the clause and in terms of the possible 'configurations' of particle and its focus. If we try to separate as much as possible the more general from the idiosyncratic facts, the following picture emerges for English (cf. Anderson, 1972; Jackendoff, 1972; Ross and Cooper, 1979; Taglicht, 1984; Quirk et al., 1985:566ff.):

A particle preceding the subject can only focus on that constituent or some part of it:

(38) a. Even/only FRED gave a present to Mary,
b. *Even/only Fred gave a present to MARY.

A sentence-final particle, on the other hand, may focus on any part of a sentence except the auxiliary verb:

(39) a. Your SUGGESTING it to Doris was stupid, even,
b. FRED could have bought a bike, even.

Similarly unconstrained in the choice of their focus are particles inside the auxiliary complex, the most frequent position of these expressions. A focus particle following one or two auxiliary verbs may focus on either the subject[6] or any of the following constituents:

(40) a. FRED may even have given presents to Mary,
b. Fred may even have given PRESENTS to Mary,
c. Fred may even have given presents to MARY.

If the particle follows the main verb, however, only the adjacent constituent(s) can be its focus.

(41) a. Fred may have given even PRESENTS to Mary,
b. *Fred may have given even presents to MARY.
c. Fred may have given presents even to MARY.

A similar constraint applies to cases where a focus particle follows its focus inside a clause:

(42) a. FRED, even, may have given presents to Mary,
b. TEN WORKERS only reported sick yesterday.

To these general facts, we have to add a number of idiosyncratic constraints on the placement of individual particles. Here are some examples:

A few particles (e.g. *only, even, just*) may occur inside a prepositional phrase and may also be inserted between a transitive verb and its object. Others (e.g. *also*) are excluded from these positions:

(43) a. I saw only/even FRED.
b. I was talking to only/even FRED.
c. But Vietnam, Chile, Cambodia, El Salvador and countless others have been aided almost to death without so much as a by-your-leave. (*New Statesman,* 6 November 1981, p. 10)
d. In only two cases did we see any results.
e. We based our argument on precisely the reasons you suggested.

(44) *They sent also John to a boarding-school, (cf. Taglicht, 1984:83)

Some particles (e.g. *too, alone, as well*) never occur at the beginning of a sentence and typically follow their focus. *Too* only precedes its focus under very specific conditions (cf. Taglicht, 1984:187ff.). *Just,* on the other hand, never follows its focus and thus never occurs in sentence-final position.

What kind of generalisations can be based on these distributional facts as far as the questions raised at the beginning of this chapter are concerned? No

convincing answer has been given so far to the question concerning the syntactic category of focus particles. Note that it is possible to find arguments for both of the analyses briefly discussed in the preceding section. The distribution of particles like *even, only, just, too,* which may occur adjacent to foci of various categories, can be used as evidence for an analysis along the lines of (23). Other members of the class enumerated in (16), however, manifest more an adverb-like behaviour and suggest that focus particles are in construction with a whole clause or verb phrase. The formal analyses proposed so far have in fact chosen one of these alternatives. An analysis along the lines of (23) is advocated in Ross and Cooper (1979): focus particles are generated in a position adjacent to their focus constituent(s) and then moved (by optional transformations) into the auxiliary complex ('Quantifier Floating') or to a higher node to the left or right of the focus constituent. Anderson (1972) and Jackendoff (1972), on the other hand, stress the adverb-like behaviour of focus particles.

As far as the possible 'configurations' of particle and focus are concerned, Jackendoff (1972:251) has formulated a principle for *even* that goes a long way towards explaining the facts described above. This principle roughly states that *even* (and other particles) c-commands[7] any focused element with which it is associated.[8] In most, if not all, of the examples presented above, it seems quite justified to assume that the focus particle is immediately dominated by a node that also dominates a possible focus.

2.3.2. German

Some of the syntactic properties of focus particles in German are similar to those described for English in the preceding section. There are, however, also a number of differences, which are obviously related to some fundamental differences in the structure of the two languages.

A diagnostic test for focus particles in German is their inability to occur by themselves in the 'forefield', i.e. the position preceding the finite verb in the main clause:

(45) *Sogar/genau/ausgerechnet kam Paul spät nach Hause.
(even/exactly came Paul late home)

If a member of the list given in (17) is acceptable in this position, it is used as a conjunctional adverb or time adverb, rather than as a focus particle. Within the *Satzklammer* ('braces'), i.e. the position between the finite verb and the non-finite verb forms in final position, focus particles generally precede their focus or the phrase containing it:

(46) a. Am Montag hat auch FRITZ Maria besucht.
'On Monday Fred also went to see Maria.'

b. Am Montag hat Fritz auch MARIA besucht.
c. Am Montag hat Fritz Maria auch BESUCHT.

A position adjacent to a preceding focus is also permitted in some cases. In the 'forefield', a particle may either precede or follow an adjacent focus. A topicalised constituent in the forefield, however, can also be the focus of a particle that follows the main verb.The first and the third possibility are clearly the preferred options:

(47) a. Erst seit WENIGEN TAGEN gibt es diese Möglichkeit.
'Only for a few days has this possibility existed.'
b. Seit WENIGEN TAGEN erst gibt es diese Möglichkeit.
c. Seit WENIGEN TAGEN gibt es diese Möglichkeit erst.

If a particle occurs in sentence-initial position, it can only focus on the following constituent or some part of it. This constraint is quite similar to the one pointed out for English in connection with (38) above.

(48) a. Nur PAUL hat seiner Frau Blumen geschickt.
'Only Paul sent flowers to his wife.'
b. *Nur Paul hat seiner Frau BLUMEN geschickt.

In contrast to English, however, the restriction exhibited by examples like (48) seems to be part of a more general constraint which requires that a focus particle selects the next constituent to the right as focus, unless the relevant expression is associated with semantic scope itself (cf. Jacobs, 1983:113f.). Examples like the following show that a particle can only be separated from a following focus by a scope-bearing element (e.g. negation, quantifier, etc.):

(49) a. ?Fritz hat auch seiner Frau die Blumen GESCHICKT (nicht nur gekauft).[9]
(Fred has also to his wife the flowers sent)
b. Fritz hat seiner Frau die Blumen auch GESCHICKT.

'Fred has also SENT the flowers to his wife.'
c. Fritz hat auch einige Gefangene GESPROCHEN (nicht nur gesehen).
(Fred has also some prisoners talked to)
'Fred has also TALKED to some prisoners.'

The first example, in which the particle *auch* 'also' is separated from its focus by two objects is clearly odd. In (49)c., by contrast, this separation is possible, since the relevant expression contains the determiner *einige* and is thus associated with semantic scope.

Another contrast to English concerns the position between a preposition and a following noun phrase. In German, focus particles can only occur inside a prepositional phrases if they focus on a quantifier or an adverbial modifier that is part of an AdjP (cf. Jacobs, 1983:69ff.):

(50) a. In nur DREI Fällen war eine Operation nötig.
'In only three cases was it necessary to have an operation.'

b. Sie arbeitet mit nur LEICHT behinderten Kindern.
'She works with only slightly handicapped children.'

c. Müller wurde von gleich DREI Gegenspielern angegriffen.
'Müller was attacked by as many as three opponents.'

d. *Ich habe mit nur PAUL gesprochen.
'I talked to only Paul.'

In view of what was said above about the adverb-like behaviour of particles, on the one hand, and their association with a focused constituent, on the other, it is perhaps not surprising that the formal accounts developed for the syntax of focus particles in German so far differ quite markedly in the generalisations and explanations they offer to account for the data presented in (46)–(50). In conclusion of this survey of syntactic problems, I will briefly summarise some of these generalisations and explanations.

Jacobs (1983; 1984) rejects the idea that focus particles should be introduced as co-constituents of some X-phrase, on the basis of both syntactic and semantic arguments. First, there are cases of multiple focusing, such that what is focused on does not form a constituent. This argument applies both to German and English and can therefore be illustrated with English examples (cf. Anderson, 1972:895; Taglicht, 1984:66ff.):

(51) a. He only showed MARY THE GARDEN (not John the tennis court as well).

b. Yesterday LENDL beat CONNORS and today BECKER beat McENROE too.

In cases like these, so the argument goes, it cannot be assumed that particles are co-constituents of their foci, which do not form a constituent themselves.

A second argument that Jacobs advances against an analysis such as (26) is based on examples exhibiting focusing from a distance such as (47)c. The proposal, frequently made in the literature, to move the focus constituent from a position adjacent to the particle into the forefield, leaving the particle in the 'middle field', is not compatible with what we know about general constraints on transformations (cf. also Anderson, 1972:895). And, to mention a third argument, Jacobs points out that focus particles cannot occur inside a prepositional phrase in German, except under the conditions described above, and thus cannot be assumed to combine with any noun phrase at all.

Jacobs's strongest arguments against an analysis such as (23) are really semantic in nature. An analysis along these lines is not a good basis for rules of semantic interpretation, since it does not enable us to build up the semantic and syntactic analysis in a more or less parallel fashion and maintain the principle of compositionality for the latter. His own proposal is based on the assumption that focus particles basically occur in positions where adverbs normally occur. As a consequence, he introduces them as co-constituents to the left of verbs and all projections of verbs (V, VP, S, etc.). The choice of focus for each particle is subject to the following constraints (cf. Jacobs, 1984):

(52) a. The focus particle must c-command all of its foci or a 'trace' of the relevant constituents,
b. The focus must be in that part of the sentence that corresponds to the semantic scope of the particle,
c. The particle cannot skip a following non-scope-bearing element, i.e. it must stand as close to a following focus as a characterisation of the relevant scope relations permits.

If we accept Jacobs's basic assumptions, all of the examples listed so far clearly obey the first constraint. In examples like (47)a., *erst* would be attached to the highest V-node (=S-node) and thus c-command its focus *wenigen Tagen*. In the two other cases (i.e. (47)b–c.), there would be a trace at the end of the sentence that is c-commanded by a particle attached to a lower V-node. The third constraint relates to properties discussed in connection with (49)a.–c. In German, a focus particle has to be adjacent to its focus or to the position where the focus constituent occurs in D-structure, unless a scope-bearing element intervenes that is included in the scope of the particle. The second constraint cannot be discussed in detail at this point.

It is an unfortunate consequence of Jacobs's analysis that a time-honoured assumption about the structure of the German sentence has to be abandoned, viz.

the assumption the finite verb in the main clause occupies the second position (V-2) and is thus only preceded by one constituent. If focus particles only combine with V-nodes and their projections, as Jacobs assumes, then a particle in front of the topic in sentences like the following must be assumed to be directly attached to the S-node. As a consequence two constituents must be assumed to precede the finite verb:

(53) Nur alter Wein schmeckt gut.
'Only matured wine tastes good.'

This is one of the reasons why Bayer (1985; 1988) rejects Jacobs's analysis in favour of one that incorporates the assumption that focus particles form a constituent with their focus in (53) as well as in all cases where they occur adjacent to it. An important part of that analysis is the attempt to provide principled explanations for the restrictions that led Jacobs into a different direction. The fact that particles can only occur inside a prepositional phrase if they focus on a quantifier or an adverbial modifier of an AdjP is seen as the manifestation of a constraint that requires a case-assigning expression (preposition, verb) to be adjacent to the phrase that receives the case. More specifically, the head of the receiving phrase can only be separated from the case-assigning expression by constituents that enter into case agreement. In (54), for example, *nur* combines with the quantifier *wenige* to form a quantifier phrase that agrees, or at least may agree, with the head of the noun phrase in its case ending:

(54) $[\text{In}[[\text{nur wenigen}]_{QP}\text{Fällen}]_{NP}]_{pp}$
'In only a few cases.'

Ungrammatical examples like (50)c. or (55) violate this constraint, since the uninflected particle intervenes between preposition and noun:

(55) *In nur Großstädten…
'In only major cities…'

Bayer argues furthermore that focus particles should be regarded as a kind of anaphora that forms a syntactic chain (cf. Safire, 1985) with a preceding focus and are bound by it:

(56) Paul_i kommt auch_i.
'Paul is coming, too.'

The constraints on possible positions of particles relative to their focus is also formulated in terms of c-command. In contrast to the suggestions made in Jacobs (1984), however, Bayer argues that it is the focus that must c-command the particle, just as any antecedent c-commands an anaphoric pronoun. This enables

him to account for many of the relevant facts in a principled fashion, especially for the asymmetry in the possible selection of a focus to the right and the left of a particle. As was noted above, a particle cannot skip a constituent to its right in the selection of a focus with the possible exception of scope-bearing expressions. The selection of a focus to the left of the p article is not constrained in this way.

This concludes the syntactic part of this study, which is simply meant to give a survey of the most salient syntactic properties of focus particles as well as of the issues and problems that arise in their syntactic description, as a background for the semantic analysis.

3
The meaning of focus particles: an overview

3.1.
FOCUS AND SCOPE

In contrast to 'pure' focus markers such as *baa* and *ayaa* in Somali or -?*a* and -*be* in Manam (Austronesian),[1] the expressions listed in (16) for English and (17) for German in the preceding chapter have a lexical meaning. In this chapter, a general overview of the parameters that play a role in the semantic analysis of these expressions will be given. The emphasis will be on the general rather than on the particular. The overview is thus meant to prepare the ground for the detailed analyses of individual particles in subsequent chapters.

It has already been pointed out very briefly that the contribution made by a particle to the meaning of a sentence depends on the meaning of two components of that sentence: (a) on that of its focus and (b) on that of its scope. The former of these two dependencies can be illustrated with the following examples:

(1) a. FRED álso bought a new car.
b. Somebody other than Fred bought a new car.
(2) a. Fred also bought a NEW CAR.
b. Fred bought something other than a new car.

The contribution that *also* makes to the meaning of (1)a. and (2)a. can roughly be expressed by (1)b. and (2)b., respectively. And since the relevant sentences only differ in the location of the focus, it must be this very fact that is responsible for the difference in meaning.

That the contribution made by a focus particle to the meaning of a sentence also depends on its scope is now also presented as an established fact in most recent studies (cf. F. and L.Karttunen, 1976; 1977; Jacobs, 1983; König, 1981; Taglicht, 1984; Kay, 1990), although this insight has not found its way into grammar handbooks yet.[2] The following minimal pair demonstrates the relevance of this factor in the semantic analysis of focus particles:

(3) a. He also drinks WHISKEY very rarely.
b. Very rarely does he also drink WHISKEY.

The focus of the particle is exactly the same in these two cases and can thus not be responsible for the difference in meaning. Nor can this difference be simply due to the fact that the quantificational adverb *very rarely* occurs in different positions, since the corresponding sentences without *also* do not differ in an analogous fashion:

(4) a. He drinks whiskey very rarely.
b. Very rarely does he drink whiskey.

Consider now the contributions that *also* makes to the interpretation of the two examples in (3):

(3′) a. He drinks something other than whiskey very rarely,
b. He drinks something other than whiskey.

Again we have spelled out these contributions by substituting a suitably restricted existential quantifier for the focus of the particle,[3] but the sentences in which we have carried out this substitution are not the same in the two cases. In (3′)a., we have taken the whole sentence, in (3′)b. we have omitted the initial adverbial. The following examples provide further evidence for the necessity of drawing a distinction between the focus and the scope of a particle and many more relevant data will be discussed in later chapters:

(5) a. Today, John interviewed only MODERATELY qualified candidates.
b. Today, John only interviewed MODERATELY qualified candidates.
(6) a. Not even A YEAR ago, he made a profit,
b. Not even A YEAR ago did he make a profit.
(7) a. I hope they won't lay off BILL, too.
b. I hope they won't lay off BILL, either.

In each of the three minimal pairs, the particle is associated with the same focus. In the first pair, only the first sentence can be continued by 'and he also interviewed some HIGHLY qualified people' and this difference in meaning can only be due to a difference in the scope of *only*. In (6), word order indicates that *not even* has scope over the whole sentence in (6)b., but not in (6)a. The distinction in (7), too, is primarily one of scope. As will be shown below, there are good arguments for the assumption that *too* and *either* have essentially the same meaning in sentences such as (7)a.–b. In contrast to *too,* however, *either* only occurs in negative-polarity contexts and takes wide scope over such contexts.

Examples such as these clearly show that the contribution made by a focus particle to the meaning of a sentence also depends on its scope. The scope of a particle can roughly be described as the semantic counterpart of that part of a sentence that is relevant for spelling out that contribution. What these examples also show is that the scope of a particle is not always given once we have identified the focus. Another point that is clearly demonstrated by the preceding examples is that a general account of the meaning of focus particles must be based on a representation in which the focus and the scope of a particle are clearly distinguished.[4]

This can best be achieved if focus particles are analysed as operators that combine with a 'structured proposition', i.e. a pair <P, <a_1 …<a_n>>, where P is a property and $a_1 \ldots a_n$ are appropriate arguments. Our analysis of particles will therefore be based on semantic representations of the general form (8)a., where a is a formula, *x* is a variable of type *a* and β is an expression of type *a* (cf. Jacobs, 1983:144 ff.; 1988). Thus we get (8)b. as a semantic representation of (1)a.:

(8) a. PRT(λx[α], β)
b. also (λx[x bought a new car], Fred)

Representations of this kind clearly meet the requirements mentioned above. In order to translate a surface structure like (1)a. into a representation like (8)b., roughly the following translation rules are required. The focused expression is replaced by a variable, which is bound by a λ-operator. The focus expression is shifted to the right into the 'focus position'. The particle then operates over the results of these rules.[5] The examples discussed so far only involve a single focus. If there are several as in (9), our formula takes the following form:

(9) He did not only show MARY THE GARDEN, but also JOHN THE LIBRARY.
(10) PRT ($x_1 \ldots x_n$ [α], $\beta_1 \ldots \beta_n$)

Focus particles are thus analysed as structure-sensitive operators. This means that λ-conversion cannot be applied in the derivation of the contribution made by *also* to the meaning of (8)b. In the last few years, the concept of a structured proposition has been shown to be relevant for the analysis of a wide variety of linguistic phenomena, e.g. for all kinds of focusing, for 'essential indexicals' and for sentences with verbs of propositional attitudes (cf. von Stechow, 1982; Cresswell, 1985).

3.2. ALTERNATIVES

In order to discuss the interaction of focus particles with their focus in a sentence, we need, first of all, to discuss the interpretation of focus itself. In the last twenty

years or so, various interpretations have been proposed for this aspect of syntactic structure:

— a focus expresses 'new information' (e.g. Halliday, 1966; Selkirk, 1984);
— a focus expresses highlighting and informativeness (e.g. Bolinger, 1985);
— a focus identifies a presupposition or a presuppositional set (e.g. Jackendoff, 1972);
— a focus expresses information that is not c-construable, i.e. the phrase in question has no semantic antecedent and has not been brought to the hearer's attention (e.g. Rochemont, 1986);
— a focus establishes a relation between the value of a focused expression and a set of alternatives (e.g. Jacobs, 1983; 1988; Rooth, 1985).

It has also become increasingly clear in the course of these discussions, however, that it is pointless to look for a uniform interpretation of focus and that different interpretations are appropriate for the different types of focus distinguished in the literature: presentational focus, contrastive focus, exhaustive focus, etc. Moreover, the exact interpretation of focus also seems to be dependent on the presence of focus-sensitive operators, such as focus particles and perhaps also illocutionary operators (cf. Jacobs, 1988:97).[6] How many types of focus and how many interpretations of focus we need to distinguish is of no central concern to us, however, since it is fairly clear how a focus is to be interpreted whenever it is associated with a focus particle: the focus of a particle relates the value of the focused expression to a set of alternatives. It is thus the interpretation proposed by Jacobs (1983), Rooth (1985) and, to a certain extent, also by Jackendoff (1972) which is adopted in this book.

With this interpretation in mind we can now look at the interaction between the interpretation of a particle and that of its focus in more detail. We have already seen that the contribution made by *also* to the meaning of a sentence can be spelled out by replacing a focus β by an existential quantifier like *somebody/something other than β* in that part of the sentence that corresponds to its semantic scope. Furthermore, each sentence with *also* entails the relevant sentence without *also*. A sentence like (1)a.—repeated here as (11)a.—warrants[7] both (11)b. and(11)c.:

(11) a. FRED also bought a new car.
b. Fred bought a new car.
c. Somebody other than Fred bought a new car.

Analogously, we can describe the contribution made by *only* to the meaning of a sentence by substituting a negated existential quantifier (=*nobody/nothing other*

than a) for a focus *β* in the relevant part of the sentence. In this case, too, we have an entailment that can simply be expressed by the relevant sentence without *only*.

(12) a. Only FRED bought a new car.
b. Fred bought a new car.
c. Nobody other than Fred bought a new car.

On the basis of examples like these we can formulate the following hypotheses about the interaction of focus particles with their focus in a sentence:

(13) a. Sentences with focus particles entail the corresponding sentences without particles.
b. Focus particles contribute quantificational force to the meaning of a sentence, i.e. they quantify over the set of alternatives (to the value of the focused expression), brought into play by the focusing itself,
c. Focus particles may include or exclude these alternatives as possible values for the open sentence in their scope.

On the basis of the third property, focus particles can be divided into two groups: 'additive' or 'inclusive' particles include some alternative(s) as possible value(s) for the variable of their scope; 'restrictive' or 'exclusive' particles imply that none of the alternatives under consideration satisfies the relevant open sentence. Applied to English and German, this criterion gives us the following two groups:

(14) Inclusive (additive) particles:
a. (G.) *auch, gerade, insbesondere, noch, schon, zumal, selbst, geschweige denn, sogar…*
b. (E.) *also, too, either, even, let alone, in particular…*
(15) Exclusive (restrictive) particles:
a. (G.) *ausgerechnet, bloß, eben, erst, genau, lediglich, nur, ausschließlich…*
b. (E.) *merely, only, exactly…*

A few additional illustrations of the points just made are perhaps in order. Consider *selbst, sogar,* and *schon* in examples like the following:

(16) Sogar/selbst DER PRÄSIDENT kam zur Versammlung.
'Even the President came to the meeting.'
(17) Schon DER GEDANKE an Arbeit macht mich unglücklich.
'The mere thought of work makes me unhappy.'

In (16), *sogar* or *selbst* licenses the inference that people other than the President came to the meeting and in (17) 'work itself', a plausible alternative to the value given, can be assumed to have the effect in question. *Erst,* on the other hand, is listed among the exclusive particles. The alternatives excluded in (18) are the second and first attempt and in (19) it is the age at which a person is entitled to a pension (i.e. 65 or 62) that is excluded as alternative value:

(18) Erst der dritte Versuch glückte.
'The third attempt was finally a successful one.'
(19) (Du bekommst noch keine Rente.) Du bist erst 58.
'(You do not get a pension yet.) You are only 58.'

Not every particle in English, German or other languages can be assigned to one of these two groups, but it seems to be an important distinction for most, if not all languages. Every language seems to have at least one inclusive and one exclusive particle. In other words, the distinction drawn in English by *also/too* vs. *only* seems to be expressible in all languages.

In addition to inclusion vs. exclusion of alternatives, there is another difference between additive and restrictive particles, which should at least be mentioned at this point: the additive ones are mostly non-truth-conditional, whereas the restrictive ones do seem to make a contribution to the truth conditions of a sentence. Anybody asserting (11)a. in a situation where (11)c. is false for a suitably restricted set of alternatives, has certainly not made a false claim providing (11)b. is true. In (12), by contrast, that part of the meaning of (12)a. that is contributed by *only,* viz. (12)c., is part of the truth conditions of that sentence. Thus two groups of focus particles with more or less identical syntactic behaviour behave utterly unlike semantically—one is invisible to truth conditions, the other seems to function more or less like generalised quantifiers. We will return to this puzzling asymmetry in a later chapter.

The alternatives picked out and brought into play as a result of focusing are always of the same type as the value of the focused expression, as is clearly shown by the preceding examples. The existential quantifier used to spell out the contribution made by a particle to the meaning of the sentence must therefore be restricted accordingly. Thus we have used *somebody (other than…)* to describe this contribution in a case like (1)a., but *something (other than…)* in (2). There is, however, another way in which the quantifiers which we will use to explicate the meaning of focus particles will have to be restricted. The selection of alternatives is highly context-dependent. The set of alternatives brought into play by uttering

a sentence with a focus particle are the ones that happen to be under consideration in a situation. Their selection may thus depend on a variety of contextual factors. The most obvious way in which alternatives may be contextually given is, of course, their enumeration in the preceding context.

(20) a. Fred was there and HIS BROTHER was there too.
b. I am always late and JOHN never gets to his class in time either.

In such cases, where the alternatives under consideration are overtly given, the expressions denoting the alternatives are frequently the focus of another particle:

(21) a. One expects a guide not only to know the terrain, but also to choose good roads and perhaps even to find a few short-cuts,
b. To take a one-goal lead and then sit on it, as though stumped for another attacking idea, is a policy it would be daft to pursue even once, let alone twice (*The Guardian,* 12 May 1980).

A few particles like *let alone, much less, never mind* in English or *geschweige denn* in German can only be used if the relevant alternatives are given in the preceding clause. In other words, they can only be used in reduced appended clauses.

The term 'alternatives', used as a heading for this section, is also meant to indicate that the contribution made by *also* to the meaning of a sentence is not a trivial one and that the contribution made by *only* does not contradict the relevant sentences without *only:* the value included by *also* or excluded by *only* must not be identical to that of the focus. This does not necessarily mean that the extensions have to differ. If the following sentence is uttered by some President of the United States to his daughter, only the intensions of the two relevant NPs differ:

(22) You have not only insulted your father, but also the President of the United States.

In order to simplify our description, we will often neglect such problems and not distinguish between intension and extension. There is, however, another aspect to this requirement of distinctness which should be mentioned very briefly. Many particles do not admit subsets or supersets of the sets denoted by their focus constituents as alternatives. This seems to be the reason why the following examples are deviant.

(23) a. *We are fingerprinting even ALL/EACH/ EVERY student.
b. Fred only eats RICE, *not fried rice or carbohydrates.

Not all particles exhibit the constraint in question. The following examples show that it is neither relevant for G. *sogar* nor for E. *too*.

(24) Hamburg hat nicht 2 Millionen sondern sogar 4 Millionen Einwohner.
'Hamburg does not have 2 million but as many as 4 million inhabitants.'

(25) Ardiles marred his impeccable play by giving the ball away for McDermott to strike the only goal—a spectacular one too— eight minutes before half-time. (*The Observer,* 9 March 1980, p. 32)

On the basis of the preceding discussion we can now describe the contribution made by *also* and *only* to the meaning of (11)a. and (12)a. more generally as follows:

(26) a. FRED also bought a new car.
b. $(\exists x)_{x = \text{Fred}}$ (x bought a new car)

(27) a. Only FRED bought a new car.
b. $-(\exists x)_{x = \text{Fred}}$ (x bought a new car)

This notation, however, does not capture the context-dependence in the selection of alternatives, i.e. the restriction in the domain of quantification that is a result of the interaction between particles and focusing. So, in order to improve on our notation, we could simply rephrase (26)–(27)b. with the help of a universal quantifier, whose interpretation is generally assumed to be restricted to a universe of discourse. On the basis of the well-known dual relationship between existential and universal quantifier (i.e. $-(\exists x)\ P(x) \equiv (\forall x) - P(x)$, (26)–(27) b. can thus be reformulated as follows:

(26′) b. $-(\exists x)_{x + \text{Fred}} \neg$ (bought a new car)

(27′) b. $(\forall x)\ [(x \text{ bought a new car}) \rightarrow (x = \text{Fred})]$

This notation, however, does not really spell out the relevant restriction in the domain of quantification, either. Elegant formal solutions for this problem have been proposed in the formal semantic analyses mentioned above (Jacobs, 1983; 1988; Rooth, 1985). I will briefly summarise two of these proposals in the last section of this chapter. Despite their inadequacy, I will still occasionally use notations like (26)–(27)b. in subsequent chapters as convenient abbreviations.

The syntactic category and meaning of the focused expression is not only relevant for the contribution that a focus particle makes to the meaning of a sentence. In some cases it is also the form of the particle itself that depends on what kind of expression is selected as focus. The following French examples illustrate this very clearly:

(28) a. Seul JACQUES aime Marie.
'Only Jack loves Mary.'
b. Jacques n'aime que MARIE/Jacques aime seulement MARIE.
'Jack loves only Mary.'
c. Jacques ne fait que SE PROMENER.
'The only thing that Jack does is take walks.'

Seul can only be used, if this particle is associated with a focused subject. *Seulement* and *ne…que,* by contrast, are used if the focus is on any constituent other than the whole verb phrase. In the latter case, the dummy verb *faire* has to be inserted in between *ne* and *que*.

3.3
SCALES

In addition to the restrictions on the selection of alternatives already discussed (identity of semantic type, distinctness from focus value, context dependence) there is another one that may play a role: some particles only select such alternatives as are ordered with respect to the focus value in a certain way. Consider *also* and *even* in examples like the following:

(29) a. John also reads SHAKESPEARE,
b. John even reads SHAKESPEARE.

Both *also* and *even* are inclusive particles. Thus both (29)a. and (29)b. imply that John reads other authors than Shakespeare. There is, however, also a clear difference between the meaning of the two particles. Only the restrictions mentioned in the last section (i.e. same type, distinctness and context-dependence) are relevant for the selection of alternatives in the case of *also*. *Even,* on the other hand, induces an ordering for the values under consideration. The values included by this particle are characterised as ranking lower than the one given. In many contexts at least, this ordering can be described in terms of likelihood (cf. F. and L.Karttunen, 1977; Karttunen and Peters, 1979). The values included by *even* are the more likely candidates for the variable of the relevant open sentence (i.e. for 'John reads x') than the value given. As a consequence, the focus value is characterised as an unexpected or surprising one. In contrast to (29)a., the example with *even* suggests therefore that Shakespeare is difficult to read.

Another minimal contrast of this kind is provided by *nur* and *erst* in German. The correct use of these two particles is a notorious learning problem for native speakers of languages (e.g. English, French, Spanish) which do not draw a distinction of this kind and where *nur* and *erst* may have an identical translation. Both *nur* and *erst* are exclusive or restrictive particles, i.e. they imply that the

contextually given alternatives do not satisfy the open sentence in their scope. What differs is the relationship between the focus value and the alternatives selected by these particles. Consider the following minimal pairs:

(30) Ich fahre nur am Donnerstag nach München.
'I only go to Munich on Thursdays.'
(31) Ich fahre erst am Donnerstag nach München.
'I won't be going to Munich until Thursday.'
(32) Nur der fünfte Teilnehmer übersprang die zwei Meter.
'Only the fifth participant jumped over two metres.'
(33) Erst der fünfte Teilnehmer übersprang die zwei Meter.
'Nobody before the fifth participant…'

Both *nur* and *erst* exclude other values for the variable of the scope. But whereas *nur* in (30) may exclude any days before or after the day mentioned, if these days happen to be under consideration in a given context, *erst* in (31) can only exclude days preceding the one denoted by the focus constituent. *Erst* only selects such alternatives as precede the focus value in such contexts. As a consequence, (31) cannot be used if the speaker wants to exclude the Friday or Saturday of a certain week. The complement of the focus value with respect to the set of values under consideration can be referred to by *sonst* in (30), the expression generally used in German for (set-theoretic) complements, and by *vorher* ('earlier') in the case of (31):

(30′) Ich fahre nur am Donnerstag…, sonst nicht.
(31′) Ich fahre erst am Donnerstag…, vorher nicht.

An analogous difference can be observed in the second pair. If the sentence with *nur* is used as a summarising statement, i.e. after the speaker has seen all competitors, it informs us that the fifth participant was the winner of the high-jump contest. The corresponding sentence with *erst,* by contrast, does not say anything about competitors following number five and may in fact suggest that there were other successful attempts after the one mentioned. So, one of the differences between G. *nur* and *erst* seems to be that the *erst* is always associated with an order. *Nur,* just like E. *only,* may but need not be associated with an order.[8]

Examples such as (29) b.–(33) show that focus particles may induce a ranking into the set of alternatives under discussion in such sentences. In other words, if they can indeed be analysed as generalised quantifiers, we can further characterise this type of quantifier as imposing a scalar structure on the domain of quantification. Before we can discuss the nature of orderings associated with focus particles, we need to consider briefly the results of more general discussions of scalar phenomena, such as Horn (1972), Gazdar (1979), Fauconnier (1975a, 1975b, 1979) and Hirschberg (in press). In these studies,

scalar phenomena and the ranking of utterances on the basis of scales are discussed in connection with attempts formally to characterise certain types of generalised implicatures, viz. 'Quantity implicatures' or 'scalar implicatures'. On the basis of Grice's first maxim of Quantity ('Make your contribution as informative as is required') a statement with a weaker expression e_2 may be taken as implicating that the relevant statement with a stronger expression e_1 cannot be made. In order to give a precise definition of such scalar implicatures, Horn (1972) and Gazdar (1979) define a 'scale' as a set of contrastive expressions of the same category, which can be arranged in a linear order according to their semantic strength.[9] Thus a set of linguistic expressions $<e_1, e_2, e_3 \ldots e_n>$ is a scale if the following conditions are met:

(34) a. If e_1 is substituted for e_2 in sentential frame S ( ) we obtain a well-formed sentence:
b. $S(e_1)$ entails $S(e_2)$, $S(e_2)$ entails $S(e_3)$, etc., but not vice versa.

The following are examples of such scales and appropriate sentential frames:

(35) a. <all, most, many, some, few>; x members attended the meeting,
b. <n,…4, 3, 2, 1>; Fred has x children.

c. <hot, warm>; It is x.
d. <and, or>; I am looking for somebody who speaks Italian x French.

Scales such as these clearly meet the conditions specified in (34). Universal quantifiers present some problems, of course, if the universe of discourse is an empty one. But if this possibility is excluded, scales such as (35)a.–d. can be defined in terms of entailment. On the basis of this definition, it is then also possible to give a precise characterisation of generalised conversational implicatures based on the first maxim of Quantity ('scalar implicatures'). Given such a scale, a sentential frame and a particular context, the assertion of one value in this frame implicates that the speaker cannot assert— or does not believe —the corresponding sentence with a stronger value. The implicature licensed by (36)a. is an example of such an upper-bounding implicature:

(36) a. Some members attended the meeting.
b. Not many members attended the meeting.

More recent discussions of scalar phenomena, notably Hirschberg (in press), have shown that scales as a basis for the ranking of utterances and a definition of Quantity implicatures cannot generally be defined in terms of entailment. One of the first to draw attention to this was Fauconnier (1975a, 1975b, 1979) who noted that superlatives may have a quantificational use, i.e. (37)a. can be used to convey (37)b.:

(37) a. The slightest noise bothers my uncle.
b. Every noise is such that it bothers my uncle.

To conclude from this that superlatives have the same meaning as universal quantifiers would be wrong, however, since the superlative in (37)a. loses its quantificational sense if this sentence is negated:

(38) The slightest noise doesn't bother my uncle.

To account for the quantificational effects of superlatives in certain contexts, Fauconnier uses the notion of a 'pragmatic scale' associated with a prepositional schema. If we substitute alternative values for the modifier 'slightest' in (37)a., progressively increasing the number of decibels, we get a scale of values $<e_1, e_2, e_3 \ldots e_n>$ such that the conditions in (34) are met. The only difference between this scale and the linguistic scales described before is that the relation between S(e_1) and S(e_2) or S(e_3), etc. cannot be assumed to be that of 'entailment' in the standard sense of the word. Fauconnier speaks of 'pragmatic entailments', i.e. of implications that are valid on the basis of reasonable assumptions about people, about rational behaviour and about the effects of noise. In the case under discussion, this assumption can be spelled out as follows:

(39) Anybody who is disturbed by a certain noise level is also disturbed by a louder noise.

In order to subsume cases like these under an entailment definition of scales, we would have to relativise the notion of 'entailment' to certain models.

Further arguments against the view that scales and the ranking of utterances can be defined by entailment can be found in most recent discussions of focus particles and scalar phenomena, but Hirschberg (in press) is clearly the most comprehensive discussion of such issues. Hirschberg shows that in addition to entailment there are many other ordering metrics that may support utterance ranking and scalar implicatures: relations such as set/subset, whole/part, type/subtype, entity/attribute, generalisation/specialisation, etc. play an equally important role. The following are examples of scales for which entailment definitions are suspect, if not downright impossible:

(40) a. <promote, condone>
b. <felony, misdemeanour>
c. <general, colonel, captain, sergeant>

Moreover, the scales supporting utterance ranking and scalar implicature need not be linear, but may also be hierarchical, in contrast to what the examples given so far suggest. On the basis of her discussion of a wide range of data,

Hirschberg concludes that the relations that support scalar implicatures are just the class of partially ordered sets (posets).[10]

Another important result of Hirschberg's study is the observation that salient expressions for the purpose of generating scalar implicature are primarily identified through focusing. This means that the structures analysed in this book are a special instance of a more general phenomenon. In examples like the following, it is the focusing of certain expressions combined with specific lexical selections and contextual assumptions that gives rise to ranking of utterances, scales and scalar implicature:

(41) a. A ROCKEFELLER could not afford to pay for this,
b. Is John leaving for London TOMORROW?
c. You would have been welcome if you had said NOTHING AT ALL. [11]

A further point that provides important background information for the analyses to follow is the observation made in several of the studies mentioned above that scales associated with specific sentential frames are reversed if these frames are changed in certain ways. This point can again be illustrated by Fauconnier's example (37)a. This sentence loses its quantificational implications if it is negated (cf. (38)), but retains these implications if the focused superlative is simultaneously replaced by its opposite value, i.e. *loudest:*

(42) The LOUDEST noise does not bother my uncle.

The scale associated with (42) is clearly the reverse of that associated with (37)a. The contexts that bring about this reversal for superlatives include not only overt negation, but also all those contexts (interrogatives, conditionals, emotive predicates, etc.) that trigger negative polarity items like *any* or *ever*.

Scalar particles interact with and further contribute to all of these scalar phenomena. Some particles like E. *even* or G. *ausgerechnet* induce an ordering into the set of alternatives under consideration, others like *only* seem to interact with an ordering specified by the context. Reversals of scales are a frequent phenomenon in sentences with focus particles. The contexts that have the effect in question seem to differ with each particle. Finally, focus particles interact with scalar implicatures and the maxims that give rise to them. One of the effects that the insertion of *only* into a sentence frequently has can be described as converting an implicature into truth-conditional context, as is shown by the following example:

(43) a. Fred has two children.
b. +>Fred has no more than two children,
c. Fred has only TWO children.

The introduction of a scalar structure into their domain of quantification is thus an important aspect of the meaning of focus particles.

On the basis of the parameter discussed in this section we can again distinguish certain subgroups of focus particles: 'scalar' particles, i.e. particles that are always associated with an order and 'non-scalar' particles. *Even, let alone, in particular, so much as* in English and *sogar, selbst, auch nur, erst* in German are examples of the former, E. *also, too* and German *auch, allein* are examples of the second group. Furthermore, there seem to be particles that are only sometimes associated with a scale, like E. *only* or G. *nur*. The orders that play a role in the analysis of focus particles seem to be partial rather than strict.

3.4. EVALUATION

There is another general aspect of the meaning of focus particles that is closely connected with the restriction on the selection of alternative values discussed in the preceding section. All particles that induce an order for the value of the focus and the alternatives under consideration also express an evaluation. The value of the focus is characterised as ranking 'high' or 'low' on some scale of relevant values in a given situation. The unspecific and context-dependent character of these evaluations can best be demonstrated if we first consider another construction that may also express evaluations. '*As* Adj./Adv. *as* MP' is the general form of this construction, i.e. it is a comparative construction and the second term of the 'comparison' is a measure phrase. Consider the following examples:

(44) a. There is good evidence as early as the nineteenth century that Britons and Americans recognised each other's speech as characteristically different.
b. This programme always commands its audience of *aficionados* even when it is on as late as midnight.

(45) a. Some sources estimate that as many as 100,000 Arabs work daily in Israel.
b. Often as few as three words side by side can be baffling unless they are somehow ranked and grouped.

In all of these cases, the phrases following the second occurrence of *as* are evaluated. Furthermore, the dimension of evaluation (time, quantity, etc.) as well as the nature of the evaluation itself is directly expressed by one member of an antonymous pair of adjectives or adverbs. Now compare this situation with the evaluations expressed by E. *only* in (46) and G. *erst* in (47):

(46) a. Only yesterday I was talking to Walter, (recently)
b. After only two hours we received a telegram, (early)

c. Only after two hours did we receive a telegram, (late)

(47) a. Er kommt erst um 8 Uhr. (late)
'He won't be here until 8.'

b. Es ist erst 8 Uhr. (early)
'It is only 8 o'clock.'

These examples show that, in contrast to evaluative comparatives, focus particles may express a variety of different evaluations. To assume that each of them is directly expressed by the particle would be a very unattractive solution, since it would entail the assumption of polysemy for each particle. Furthermore, it would not account for the fact that the differences in the evaluations expressible by a particle are systematically linked to certain contextual features. The evaluation expressed by *only* in (46)c., for instance, seems to be due to an interaction of several factors: (a) the restrictive meaning of *only,* (b) the fact that the focus is a time expression, and (c) the relationship of *only* to the rest of the sentence, which is signalled by inversion.

This suggests that the evaluation expressed by a particle is much more abstract than that expressed by evaluative comparatives and that concrete evaluations like the ones given in brackets in (46) and (47) are the result of an interaction of the basic meaning of particles with specific contextual factors.

Various proposals have been made to explicate formally this evaluative component in the meaning of focus particles. In their analysis of G. *nur* 'only', Lerner and Zimmermann (1981:135), for example, define a scale as a triple $\sum_c$ $<A_c, <_c, <U_c>$ such that:

(48) a. A_c is a set of sets
b. $<_c$ is an order
c. $U_c \subseteq A_c$

In order to account for the fact that a context of utterance 'c' determines such a scale for each token of a scalar particle, all elements of this triple are indexed with 'c'. 'U_c' stands for a designated subset of the set of entities under consideration, viz. the values considered as ranking low in a context.

A different explication of the evaluative presuppositions triggered by many particles is given in Jacobs (1983). According to Jacobs, focus particles do not only induce a scale but also specify an upper and a lower 'threshold value' for each scale. If the focus value does not precede the upper threshold value it is evaluated as ranking high, a focus value that does not follow the lower threshold value is evaluated as ranking low. Note that such a threshold value cannot simply be determined by the context in the scope of the particle. In cases like the following, the initial clause is responsible for two very different lower threshold values, even though the two instances of *only* take the same open sentence as their scope:

(49) a. I would like to see this movie, but I have only $2.
b. I would like to buy a Porsche, but I have only $25,000.

In order to avoid highly complex explications and notations, we will try to capture this evaluative aspect of the meaning of focus particles by saying that a particle may evaluate its focus value as a 'maximal' or 'minimal' value of the relevant partially ordered set. Given (50)a. as the general semantic representation of a sentence with a focus particle, we can represent these evaluations as follows:

(50) a. $FP(\lambda\, x(\alpha), \beta)$
b. $Max_c(\lambda\, x(\alpha), \beta)$
c. $Min_c(\lambda\, x(\alpha), \beta)$

The terms 'minimal' and 'maximal' have their usual mathematical definitions (cf. Wall, 1972:142f.):

(51) Given a partially ordered set (A, R):
a. an element x in A is minimal iff there is no element in A that strictly precedes x.
b. an element x in A is maximal iff there is no element in A that strictly follows x.

The fact that both the selection of the relevant set and the evaluation is highly context-dependent is expressed by the index 'c'. This index is also meant to indicate that the evaluation usually expresses the speaker's point of view. Since more than one element may be minimal or maximal in a partially ordered set, our explication accounts for the fact that it need not be a single value that is regarded as maximal or minimal in a context.

The evaluation expressed by G. *gleich* in (52)a. can now be described as (52)b and analogous analyses can be given for (53) and (54):

(52) a. Er hat gleich VIER Zeitungen gekauft.
'He bought as many as four papers.'
b. Max_c (λ x[Er hat x Zeitungen gekauft], vier)
(53) Du hättest ihn nicht gleich SCHLAGEN sollen.
'There was no need to actually hit him.'
(54) Gleich der ERSTE Schuβ war ein Treffer.
'The very first shot was a hit.'

These examples show that G. *gleich* neither includes nor excludes alternative values, but has a purely evaluative meaning. Another particle which expresses an

evaluation as 'maximal' is E. *even,* but, in contrast to G. *gleich, even* is also an inclusive particle:

(55) One expects a good guide not only to know the terrain, but also to choose good roads and perhaps even find a few shortcuts.

Whenever E. *only* is associated with an order, on the other hand, the value of its focus is always evaluated as minimal. That *only* and *even* may express contrary evaluations is apparent in examples like the following:

(56) a. You only need a B grade.
b. Nonsense. You even need an A grade.

In addition to these two evaluations, many languages also seem to have the expressive means for evaluating an entity as 'medium', i.e. as neither maximal nor minimal. The adverbs *at least* in English and *wenigstens, immerhin* in German seem to express such an evaluation:

(57) a. At least he tries.
b. Paul may not be intelligent, but at least he is reliable,
c. Paul hat immerhin drei Bücher geschrieben.
'Paul has written three books (after all).'

Focus particles share this evaluative property with a number of other expressions, notably the comparative construction mentioned above and adjectives like E. *very* (max.), *whole* (max.), *mere* (min.); G. *blo*β, *ganz* (min.); *voll, glatt, satt, blank* (max.); Norw. *bare* (min.); *hele* (max.); etc.

(58) a. Ganze zehn Mann wurden gerettet.
'Only ten people were saved.'
b. He stayed for a mere half-hour.

Given this similarity, it is not surprising that expressions of both types may develop into focus participles. English *so much as* and G. *blo*β ('bare, only') are examples of such developments.

3.5.
SCOPE

In most of the examples discussed so far, the choice of focus automatically determines the scope of a particle. The substitution of a variable for a focused expression gives us the open sentence, that is relevant for defining the set of contextually relevant alternatives, for determining the order among them and for spelling out the exact contribution made by the particle to the meaning of the

sentence. Examples like (59), however, show that the scope of a particle cannot always be identified with (the semantic counterpart of) a whole sentence or clause:

(59) a. They see only NEIGHBOURS very often,
b. Very often they see only NEIGHBOURS.

In order to account for the contribution made by *only* to the meaning of these two sentences, we have to assume that the particle may take wide scope over *very often* in (59)a., but narrow scope in the second example, so that only a part of the sentence (i.e. 'they see x') is relevant for spelling out the existential implication of *only* in (59)b. Such questions of relative scope arise whenever focus particles co-occur with other scope-bearing elements (quantifiers, negation, sentence adverbs, etc.) in a clause. Given such a co-occurrence, there are several ways of marking the relative scope of two operators in surface structure:

Left-to-right sequence.

Very frequently it is simply the left-to-right sequence that indicates their relative scope: the leftmost element takes wide scope over the operator that follows. This is the situation in examples like the following:

(60) a. Even Fred read only *Syntactic Structures*.
b. Fred, in particular, did not contribute to the collection.
c. He also drinks whiskey very rarely.
d. Both Joan and Susan answered only one question.

It is a consequence of these scope relations that the passive versions of (60)a and (60)d. are not equivalent to their active counterparts, since a change in the sequence of the relevant operators results in a change of relative scope:

(61) a. Only *Syntactic Structures* was read even by Fred.
b. Only one question was answered by both Joan and Susan.

The passive sentence (61)b. implies that one specific question was answered by both women, whereas its active counterpart carries no such implication (cf. Taglicht, 1984:142ff.).

In German, linear sequence is the most important indicator of relative scope. In the so-called 'middle field' *(Mittelfeld),* i.e. the position between a finite verb and non-finite verb forms, it is invariably the case that the leftmost operator

takes the widest scope (cf. Jacobs, 1982; Lerner and Sternefeld, 1984). Apparent exceptions only concern the 'topic' or 'forefield' position. An operator preceding the finite verb of a main clause may have narrow scope with respect to a following operator, as in the following case:

(62) Alle Aufgaben hat nur PAUL gelöst
'Only Paul has solved all of the problems.'

In cases such as these, linear sequence can be assumed to reflect scope relations on a more abstract level. In English, linear sequence also plays a role, but only as one factor among others.[12]

Intonation (tonality)

Taglicht (1984:147ff.) and others before him have noted that examples like the following may be ambiguous between a wide scope and a narrow scope reading of the focus particle relative to the adverbial in final position:

(63) a. Only PETER was here the whole day.
b. JOHN álso watched the tennis game quite often.

Sentences such as these are not really ambiguous, however, if their intonation is taken into account. If a sentence-final operator takes wide scope over a preceding one, it typically forms a separate tone-group. Consider the following minimal pairs given in Taglicht (1984:148, 161):

(64) a. /Only SPANISH is spoken throughout the city./
b. /Only SPANISH is spoken /throughout the city./
(65) a. /SUSAN álso called the following day./
b. /SUSAN álso called /the following dáy./

Examples like these show that 'tonality' in the sense of Halliday (1966), i.e. the division of a sentence into tone groups may also serve as an indicator of relative scope in English. If the leftmost operator takes wide scope over a following one, there is only one nuclear tone and thus only one tone group. A sentence-final operator takes wide scope over a preceding one, if it constitutes a separate tone group. Generalising from such examples, we can thus formulate the hypothesis that the scope of a particle in English is co-extensive with the tone group containing it.

Lexical marking

Another possibility of marking relative scope in simplex sentences with two operators is illustrated by examples like the following:

(66) a. I hope they did not lay off PAUL, too.
b. I hope they did not lay off PAUL, either.

The contributions made to the meaning of these sentences by *too* and *either* can be spelled out as follows:

(66′) a. Somebody other than Paul was laid off.
b. Somebody other than Paul was not laid off.

To account for the minimal difference in these implications we can simply assume that *too* and *either* have basically the same additive meaning, but that the negative polarity item *either* is only used if a preceding negative (or negative polarity context) is in the scope of the particle. This analysis is well in line with the traditional view that *either* is simply a suppletive form of *too,* used in negative polarity contexts. Note also that (66)a. and (66)b. have the same translation into German except for the linear sequence of particle and negation: *auch* translates both *too* and *either,* but the particle precedes *nicht* if it takes wide scope over negation:

(67) a. Ich hoffe, daβ sie nicht auch (noch) Paul entlassen haben.
b. Ich hoffe, daβ sie Paul auch nicht entlassen haben.

Similar contrasts to the one just discussed can be found in Finnish and French. F. and L.Karttunen (1976) have argued that the distinction drawn in Finnish between *-kin* vs. *-kaan* or *jopa* vs. *edes* can best be explained if we postulate the same meaning for each pair but different scope preferences. The second member of each pair is selected to mark wide scope over a preceding negative-polarity (downward-entailing) context:

(68) a. Olen hankkinut autonkin.
'I have got a CAR, too.'
b. En ole hankkinut autoakaan. (cf. Karlsson, 1983:192)
'I haven't got a CAR, either.'

The distinction between F. *aussi* and *non plus,* to give one more example, can probably be explained along similar lines.[13]

In English, marking of relative scope by lexical means seems to be a more general phenomenon. Ladusaw (1980) has argued that the difference between negative polarity *any* and *some* is essentially one of scope marking. Both can be analysed as existential quantifiers, but *any* invariably takes narrow scope with respect to another operator, whereas *some* has a clear preference for wide scope:

(69) a. Fred did not talk to any students,

b. Fred did not talk to some students.

This preference for wide scope also shows up in the compounds of *some*. Ladusaw (1980) noted that the following sentences may have two interpretations depending on the relative scope of negation and frequency adverbial:

(70) John does not go to class (,) always/usually.

If *sometimes* is substituted for *always* or *usually,* however, the adverbial can only take wide scope. The following sentence has only one interpretation:

(71) John does not go to class sometimes.

It is quite plausible to assume that this relatively strong use of lexical means to mark relative scope observable in English correlates with certain constraints imposed on word order in this language. Since the position of negation is fixed in sentences like (69)–(71), relative scope cannot be expressed through the linear sequence of the relevant operators, as, for instance, in German.

The scope of a focus particle cannot only be delimited by another operator co-occurring with the particle within the same clause, but also by certain 'bounding' nodes (NP, S). In German, focus particles inside a subordinate clause or a complex prenominal modifier cannot include the main clause in their scope (Jacobs, 1983; 1984b):

(72) Es haben sich einige nur in BOTANIK qualifizierte Leute beworben.
'Some people only qualified in botany have applied.'

Examples like the following show that such a constraint is not valid for English. In cases such as these, *only* may have either clausal or sentential scope (cf. Taglicht, 1984:150), as the two paraphrases show:

(73) a. I knew he had learnt only SPANISH.
b. I knew he hadn't learnt any other language,
c. I didn't know he had learnt any other language.

In both English and German, particles which select a quantifier as focus and occur inside a prepositional phrase operate purely within that phrase:

(74) a. For only TEN dollars, you can get a very good meal.
b. Für nur ZEHN Mark kannst du ein sehr gutes Essen bekommen.

In English, examples like (74)a. contrast with sentences in which the order of preposition and particle is reversed not only in their intonation and interpretation, but also in the position of subject and auxiliary verb:

(75) Only for TEN dollars can you get a very good meal.

Inversion of subject and auxiliary after 'negative' operators in initial position is generally regarded as a marker of wide scope (cf. Liberman, 1974). On the basis of this criterion *(not) even* in (76)a. must also be assumed to function within the adpositional phrase only, in contrast to(76)b.:

(76) a. Not even a year ago, he managed to make a profit,
b. Not even a year ago did he manage to make a profit.

Some particles function exclusively within a phrase regardless of the syntactic configuration: E. *alone* is a clear case in point:

(77) a. You can get a B grade for THAT ANSWER alone.
b. By INTERNAL CONTRADICTIONS alone, it is a book patently full of half-truths.

Alone is usually grouped together with the restrictive (exclusive) particles; in fact it is sometimes described as being 'virtually synonymous with *only*' (Quirk *et al.* 1985:608). In examples like (77), however, *alone* seems to function more like *even* and other additive particles: the second sentence implies that there are other reasons for describing the relevant book as 'full of half-truths'. The reason for this apparent contradiction is that the scope of *alone* is confined to the prepositional phrase. Neither E. *only* or the German cognate *allein* are subject to this restriction. The following examples show that *allein* may have phrasal scope just like *alone,* but may also have clausal scope like any other particle:

(78) a. Allein in HAMBURG/ sind 20,000 Menschen árbeitslos./
'In Hamburg alone 20,000 people are out of work.'
b. /Allein in HAMBURG sind 20,000 Menschen arbeitslos./
'Only in Hamburg are 20,000 people out of work.'

A paraphrase of (77)b. with *only* would thus have to indicate clearly that the scope of the particle does not include the whole sentence:

(77′) Judging only on the basis of internal contradictions…

If the scope of a particle is restricted to a phrase, as in (74), (76)a. or (77), there is no open sentence in terms of which the contribution of the particle to the meaning of a sentence can be spelled out. We must therefore assume that the meaning of

the particle is a purely evaluative one in such cases or that the meaning is to be spelled out in terms of a paraphrase that is determined by the preposition and the rest of the sentence. Restrictions in the scope of a particle as exemplified by (77), as a result of which the scope of a particle is often co-extensive with its focus, are by no means a rare phenomenon. In fact, syntagmatic relations of this kind seem to be involved in several constructions as well as historical developments. Since such constructions and developments will be discussed in later chapters, only a few examples will be mentioned at this point.

In some cases where two particles combine with the same expression, the particles are associated with the same focus, but differ in their scope. In Chapter 5 many arguments will be given for the view that the combination *schon allein* in German sentences like the following should be analysed in this way:

(79) Schon allein die Formulierung war eine Gemeinheit.
'The wording alone was an impertinence.'

Moreover, some combinations of particles that can no longer be analysed compositionally like German *auch nur* or Dutch *ook maar* 'so much as, even' may well have developed from such a constellation. Another interesting phenomenon in this context is the fact that 'intensifies' (emphatic reflexive markers) like German *selbst* have a variety of different interpretations, meanings or uses (cf. Edmondson and Plank, 1978). In Chapter 4 an attempt will be made to reduce these multiple 'meanings' to a few basic meanings of an operator that may take phrasal or clausal scope.

At this point it seems useful to reconsider some of the syntactic facts discussed in the preceding chapter in the light of the semantic analysis presented so far. It has been demonstrated in great detail in this chapter that the contribution made by the particle to the meaning of a sentence depends both on the meaning of its focus and that of its scope. Given this double dependence, there is also a double demand on the syntax of focus particles: (i) to identify their focus and (ii) to identify their scope. The first requirement is obviously best fulfilled by particles that are added to a focus expression as clitics or are at least adjacent to their focus. The second requirement, on the other hand, is best fulfilled if the particles function as adverbs and are in construction with a clause or a verb phrase. As a consequence, these two requirements may lead to a conflict. A clear identification of the focus, a requirement often imposed on the position of a particle in prescriptive grammars of English, may give an inadequate or even misleading picture as far as the scope is concerned and vice versa. Taglicht (1984:150ff.) discusses a variety of examples where a clear identification of the focus through an adjacent position of the particle results in scope ambiguity:

(80) I knew he had missed only ONE lecture.
(81) a. They were advised to learn only SPANISH.

The ambiguity disappears if the particle is shifted into a preverbal position. The following two sentences have only one of the two interpretations that (81)a. may have, but they do not clearly identify the focus:

(81) b. They were advised to only learn SPANISH.
c. They were only advised to learn SPANISH.

It seems that at least some of the syntactic peculiarities of focus particles observable in a single language as well as across languages are a reflection of these conflicting demands on their syntax. The phenomenon referred to above as scope marking by lexical means could also be seen as a response to such conflicting demands. If the scope is marked by lexical selection, the position relative to another scope-bearing element becomes unimportant and the particle can be adjoined to any focus expression.

3.6. ENTAILMENTS, PRESUPPOSITIONS AND CONVENTIONAL IMPLICATURES

In the course of the preceding discussion it should have become clear that the contributions made by various groups of particles to the meaning of a sentence are not all of the same kind. We have already drawn attention to the asymmetry between the meaning of additive particles and that of restrictive particles. Moreover, it is obvious that the evaluative components discussed in 3.4. are not standard entailments. On the other hand, the restrictions (or 'exclusions') expressed by restrictive particles like *only, merely,* etc. in sentences like the following are such standard entailments. A sentence like (82)a. is true only if (82) b. is true; otherwise it is false:

(82) a. Only Fred made a generous contribution.
b. Nobody other than Fred made a generous contribution,
c. Fred made a generous contribution.

But how are we to describe the status of (82)c., which is clearly also part of the meaning of (82)a. and how are contributions of additive particles to the meaning of a sentence to be characterised?

The answer generally given to these questions in the relevant literature is that these aspects of meaning have the status of presuppositions (cf. Horn, 1972). Seuren (forthcoming), for example, groups *only, even, too* and different types of cleft constructions together into one of his four classes of presupposition triggers. To give a definition of 'presupposition' or even to summarise various attempts at giving such a definition is clearly beyond the scope of this chapter and only a few observations will be made instead. One of the basic observations and insights underlying the notion of presupposition is that in using certain

expressions or constructions a speaker presents certain propositions as having been established or as taken for granted by the participants in a verbal interaction. In other words, presuppositions are in clear contrast with assertions. Both in asserting P and in presupposing P, the speaker is committed to P. But whereas in the former case, the speaker countenances the possibility that P may be false, speakers present themselves as manifesting a much deeper kind of commitment in the latter case. In presupposing P, speakers do not envisage the possibility of a counter-assertion, i.e. they do not present the proposition as being subject to debate (cf. Burton-Roberts, 1989a). Whether the concept of presupposition is a semantic or a pragmatic concept has been a subject of much controversy during the last twenty years. Until very recently, the prevailing view was that all semantic theories of presupposition have been refuted once and for all, but two recent attempts to revive the semantic concept of presupposition (cf. Seuren, 1985 and forthcoming; Burton-Roberts, 1989a) show that the debate has by no means been settled.

We will follow Seuren and Burton-Roberts in operating with a semantic notion of presupposition. This means that presuppositions are regarded as systematic properties of sentence types and not as incidental properties of utterance tokens. Moreover, presuppositions are regarded as being structurally implicit in their carrier sentences. No attempt, however, will be made to give a summary of these theories. Nor will I have anything to say about the projection problem. All that needs be said here is that the projection behaviour of presuppositions differs from that of standard entailments. To establish whether a certain aspect of the meaning of focus particles is a presupposition or not, I will employ the usual tests: (i) the 'entailment test' and (ii) the test of discourse acceptability (cf. Seuren, forthcoming). The first test is based on the assumption that presuppositions are one type of entailment of their carrier sentences. Thus whenever A presupposes B (A>>B), a speaker cannot utter A and at the same time leave open the possibility of not-B. In other words, the assertion of 'maybe not-B and/but A' results in a contradiction. The test of discourse acceptability sets presuppositions off against ordinary entailments: whenever A>>B, the sequence 'B and A' must form a natural and acceptable piece of discourse. In addition to these two tests, there are two or three others which are not generally accepted as being reliable.[14]

On the basis of these tests, we can make the following slightly simplified statements:

(83) a. Additive particles trigger the presupposition that there is an alternative value under consideration that satisfies the open sentence in the scope of the particle.
b. Restrictive particles trigger a presupposition that corresponds to the relevant sentence in the scope of the particle.

The following sentences show that these claims are substantiated by the tests mentioned above:

(84) a. !Maybe nobody else distributed leaflets, but John distributed leaflets too/as well.
b. Fred distributed leaflets and John distributed leaflets too/as well.
(85) a. !Maybe John didn't distribute leaflets, but only John distributed leaflets.
b. John (distributed leaflets) and only John distributed leaflets.

This asymmetry in the meaning of additive and restrictive particles is-also revealed by the negation test. Sentences with restrictive particles can be negated, whereas additive particles rarely show up in negative sentences unless they take wide scope over the negation. This is exactly what we expect on the basis of the preceding discussion. Since additive particles do not make a contribution to the assertion, i.e. to that part of sentence meaning that is put up for debate, there is no point in using them when the assertion is negated. Whenever additive particles do occur in the scope of a negation, a specific semantic effect is created over and above the meaning of the expressions and constructions in question:

(86) a. (G.) Ich kann diese Aufgabe nicht auch noch übernehmen.
b. (E.) I cannot do this job too/as well.

Restrictive particles, on the other hand, do make a contribution to the assertion which can be accepted or rejected by a counter-assertion:

(87) a. Only George distributed leaflets.
b. Not only George distributed leaflets.

Let us now return to the evaluative components discussed in 3.4., which are also part of the meaning of many scalar focus particles. These evaluations are clearly not standard entailments, but they do not seem to be presuppositions in the sense discussed above either. In order to demonstrate this we need to look at a few examples. *Only* can roughly be analysed as ranking low on some scale. How this scale is specified exactly in each context will be discussed in Chapter 5. *Even,* by contrast, characterises its focus value as ranking high. To simplify the discussion at this point, we will follow Karttunen and Peters (1979) in assuming that the scale is one of likelihood: the focus value of *even* is characterised as the most unlikely to satisfy the open sentence in the scope of the particle. And, to give another example, *ausgerechnet* in German can roughly be analysed as evaluating the focused entity as the least suitable for the relevant propositional schema. On the basis of this rough analysis, it can be shown that these evaluative components seem to conform to the test of discourse acceptability, but they clearly do not meet the entailment test. Consider the following example (88)a., the evaluation triggered by *even* ((88)b.) and the results of applying the two tests to this example:

(88) a. Even John sang along with the choir.
b. John is the least likely person to sing along with a choir,
c. Maybe John is not the least likely person to sing along with a choir, but even John sang along with the choir,
d. John is the least likely person to sing along with a choir, but even John sang along with the choir.

These examples show that whereas the test for discourse acceptability (cf. (88) d.) seems to work, the entailment test clearly does not. Even if (88)c. is a little odd, there is no clear contradiction. Obviously, the evaluations expressed by scalar focus particles are not truth-conditional aspects of meaning and thus cannot be presuppositions in the sense discussed above.

Given that we are working with a semantic concept of presupposition, all we have shown so far is that the evaluative meaning of focus particles cannot be captured by such a concept. The inapplicability of the entailment test, however, is not the only property that distinguishes these evaluations from the presuppositions described above. The evaluations also differ from presuppositions in their projection behaviour. According to the vast majority of numerous analyses of the projection problem, presuppositions survive embedding into contexts in which ordinary entailments are not inherited and are weakened to default assumptions in other contexts. Moreover, they can be filtered out in specific contexts. The relevant tests are difficult to apply to the evaluations expressed by focus particles, but there is at least some evidence that not all of those properties of presuppositions are shared by the evaluations under discussion. For one thing, evaluations cannot be filtered out. On the other hand, they exhibit a different kind of projection property, namely a 'point of view' uncertainty. If someone utters (89), the belief that Kohl is the least likely person to be eloquent can be attributed to either the speaker or to Harry:

(89) Harry believes that even Kohl will be eloquent.

Similar observations can be made in connection with G.*ausgerechnet*. In (90) it can be either the speaker or Peter who finds Gran Canaria the least suitable place for a vacation:

(90) (G.) Peter hat mir erzählt, daβ seine Eltern ausgerechnet nach Gran Canaria fahren wollen.
(E.) Peter told me that his parents want to go to Gran Canaria of all places.

Because of this essentially deictic character of evaluations, we will follow Levinson in analysing them as conventional implicatures and in drawing a sharp distinction between presuppositions and conventional implicatures. The notion

of a conventional implicature was introduced by Grice (1975:44) and opposed to that of a conversational implicature, another aspect of non-truth-conditional meaning. But, partly as a result of Grice's cursory discussion and meagre exemplification of the former notion and partly as a result of the pragmatic turn of the theory of presuppositions, these two notions are often conflated (cf. Karttunen and Peters, 1979; Gazdar, 1979). In Levinson (1979), important arguments are presented for keeping these two notions apart and for a specific explication of the notion of a conventional implicature. Levinson regards conventional implicatures as essentially deictic in nature, i.e. as expressing a direct relationship between an aspect of the context and a linguistic form. Moreover, they differ quite clearly from presuppositions in their projection behaviour. The problem in the case of conventional implicatures, which primarily express attitudes, essentially consists in attributing the relevant attitudes to their appropriate sources. Levinson argues that such a notion of conventional implicature plays an important role in the analysis of social deixis, honorifics in particular, and connectives (*however, moreover, besides,* etc.). It is exactly this notion of conventional implicature which will be used here for the analysis of certain aspects of the meaning of focus particles.

It should also be mentioned at this point that a different explication of the notion of conventional implicature was recently proposed by D.Blakemore (1987). Blakemore regards such implicatures as metapragmatic instructions to process the sentence containing the relevant trigger in certain types of context. But since Blakemore's suggestions seem to be more relevant for the analysis of modal particles and conjunctional adverbs than for focus particles, we will defer a discussion of these ideas to a later chapter.

3.7.
SENSE RELATIONS

The preceding discussion has shown that the meaning of focus particles can be described in terms of a few general parameters. On the basis of these parameters we can now also describe some paradigmatic sense relations (in the sense of Lyons, 1977:270ff.) that hold between members of this class in English, German and other languages. The fact that focus particles can be shown to contract such sense relations with other members of this class gives further support to the view that it makes sense to distinguish such a subclass from other 'adverbs' or function words.

First of all, certain focus particles are related to others in terms of 'duality' (cf. Löbner, 1987a). The test criterion for this sense relation is the equivalence between two formulae with the relevant expressions such that one contains an outer and the other an inner negation. Existential and universal quantifiers in predicate logic provide a straightforward example of such a relationship (cf. Barwise and Cooper, 1981):

(91) a. $(\forall x) \neg P(x) \equiv \neg (\exists x) P(x)$

b. $\neg (\forall x) P(x) = (\exists x) \neg P(x)$

Such a relation of duality holds between non-scalar additive particles like G. *auch* ('also, too') and restrictive particles like *nur* ('only') and between the scalar particles *erst* and *schon* in German, which do not have counterparts in English. The following examples show that these expressions satisfy the test criterion:[15]

(92) a. Nicht nur Ausländer waren anwesend. ≡Auch Einheimische (i.e. Nicht-Ausländer) waren anwesend.
'There were not only foreigners present.' ≡'There were also countrymen (i.e. non-foreigners) present.'

b. Er hat nicht schon drei Äpfel gegessen. ≡Er hat erst zwei (i.e. nicht-drei) Äpfel gegessen.
'He has not eaten as many as three apples yet. ≡He has only eaten two (i.e. not-three) apples so far.'

In addition to the examples discussed, there is of course a wide variety of pairs of linguistic expressions which manifest this relationship of duality: modal operators like *possibly—necessarily; may/can-must;* aspectual adverbs (phrase quantifiers) like *already-still; enough —too,* etc. In his analysis of such expressions, S.Löbner (1987a) has shown that duality is an essential property in the lexical structure of many quantifier systems.

Another sense relation that structures the 'semantic field' of focus particles is hyponymy (cf. Lyons, 1977:291ff.). Hyponymy is definable in terms of unilateral implication. On the basis of this test, scalar additive particles like E. *even* or G. *selbst, sogar* can therefore be analysed as hyponyms of non-scalar additive particles like E. *also, too* or G. *auch:*

(93) Even FRED came to the meeting |=FRED álso came to the meeting.

Particles like *only* and *even* in English, or *nur* and *sogar* in German are linked by a relation of oppositeness. If both particles are used in a scalar sense, they pick out extreme values on opposite ends of the same scale:

(94) a. Even a MEDIOCRE performance will please the boss,
b. Only an EXCELLENT performance will please the boss.

A relationship of the same kind holds between E. *even* and *let alone, much less* in negative-polarity (downward-entailing) contexts. *Even* and *let alone* pick out extreme values on opposite ends of the same scale in such contexts:

(95) They can barely even read A NEWSPAPER, let alone POETRY.

All of these paradigmatic semantic relations that may hold between focus particles may also manifest themselves syntagmatically, i.e. in typical collocations. *Not even a, let alone b* as in (87) or *not only a, but also b* are examples of such collocations. The following example (cf. (16)a.) shows how syntagmatically related particles may be combined:

(96) One expects a good guide not only to know the terrain, but also to choose good roads and perhaps even to find a few short-cuts.

3.8.
CONCLUDING REMARKS

This concludes our survey of the parameters that may play a role in the analyses of the meaning of focus particles presented in the chapters that follow. As a consequence of the both descriptive and theoretical orientation of this book and of its broad scope, some of these analyses will be rather informal. We will normally employ the semi-formal notation used above and not pay much attention from now on to fundamental questions and problems that arise in a formal description of focus particles and focusing in general. Before concluding this chapter, I would therefore like to address briefly some of these problems and give a rough impression of the solutions that have been proposed in the formal studies mentioned above.

As pointed out earlier (cf. 3.2.), an adequate description of the meaning of focus particles has to incorporate an explicit account of the restriction in a domain of quantification as a result of the interaction between a particle and its focus. Following a lead in Jackendoff (1972), Jacobs (1983;1988) and Rooth (1985) have proposed interesting and elegant solutions for this problem. Jacobs's proposal is formulated in a rule which associates each formula that contains a focused expression with a set of alternatives, relative to a world 'w' and a context of utterance 'k'. These alternatives are the range of a function which assigns at each context the possible extensions to the λ-expression (i.e. the complex predicate) that is part of such a formula. The set of alternatives can thus be represented by the intension of the λ-expression (written as/λx(α)/) in the sense of Montague. To illustrate this with an example like (7)a., the set of relevant alternatives at a context are in this case the possible extensions that the predicate (λx[x bought a car]) has at that context. As a consequence, the meaning of (7)a. can be represented as follows:

(97) a. (=(7)a.) Only FRED bought a new car.
b. (∀y) [/λx[x bought a new car]/(y) [(y bought a new car) → (x=Fred)]]

Another remarkable feature of the framework developed in Jacobs (1988) is that it can easily accommodate the phenomenon of multiple focusing. In fact, sentences with a single focus are only regarded as a special case of a more general situation. In a formula with n different foci, the set of relevant alternatives is defined as a set of n-tuples.

A slightly different, if also more complicated, solution for the problem of context-dependence in the selection of alternatives is offered in Rooth (1985). Rooth associates each phrase with a 'separate and focus-sensitive component of meaning', a 'domain'. These recursively defined domains differ from the normal denotation of a phrase only if that phrase contains a focus. The domains of focused phrases are part of the semantic representation of a sentence and restrict the quantification induced by the particle. Again, it is easiest to explain the gist of Rooth's proposal with the help of an example. For a sentence like (98)a., the domain selected for the quantification expressed by *only* is represented by (98)b., so that the contribution of *only* to the meaning of (98)a. comes out as (98)c.:

(98) a. John only likes BILL.

b. $\forall P(\exists x)\,[P = \text{like}(x)]$

c. $\forall Q[Q(\text{John}) \,\&\, \exists x\,Q = \text{like}(x)] \rightarrow Q = \text{like}(\text{Bill})]$

Thus, (98)a. is roughly analysed as saying that if a proposition of the form 'John likes x' is true, it is the proposition 'John likes Bill'.

Another problem neglected in this book for which Rooth offers a solution is the variability of focus particles in their category membership. It was pointed out in Chapter 2 that focus particles in English and German behave like ad-nominals in some cases, but like VP-adverbials and like sentential adverbials in others. Furthermore, certain particles may also form a quantifier phrase with a quantifier. Rooth does not reduce these different uses to one basic use, but defines a family of cross-categorial operators on the basis of the adsentential use. This analysis is somewhat parallel to that proposed for coordinating conjunctions like *and, or* by several people and it enables Rooth to base the interpretation of sentences with focus particles on logical forms which are more or less identical to their surface structures. The difference between the ad-nominal and the ad-VP use of *only* in English is also the basis for Rooth's explanation for the ambiguity of sentences like (99), as opposed to the non-ambiguous (100):

(99) We were required to study [only SPANISH]$_{NP}$

(100) We were required to [only study SPANISH]$_{VP}$

4
Additive particles

4.1.
SIMPLE INCLUSION

The first group of particles whose semantic properties and typical uses will be examined in more detail are the 'inclusive' or 'additive' particles. More specifically, we will first examine those among this subclass which generally do not induce an ordering, but operate over an unordered set of contextually relevant values. The relevant subclass of focus particles includes the expressions *also, too, as well, either, in addition, likewise* and *similarly* in English and the expressions *auch, ebenfalls, ebenso, gleichfalls* in German:

(1) a. Also on the agenda is a paper on POLLUTION,
b. We bought SOME WINE, as well/ too,
c. JOHN similarly has seen it.
d. John also met MARY.

The meaning shared by all of these expressions can roughly be described as follows:[1]

(2) a. also(λ x(α), β)
b. α(β) (entailment)
c. (∃y) [/λx(α)/(y) & (y=β) & α(y)] (presupposition)

All sentences with simple additive particles entail the corresponding sentence without particle and presuppose furthermore that at least one of the alternative values under consideration in a context satisfies the complex predicate represented by the λ-expression. Thus we get the following interpretation for a simple example like (3) a.:

(3) a. John also met Mary.

b. $(\exists y)\,[\lambda x(\text{John met } x)(y) \,\&\, (y = \text{Mary}) \,\&\, (\text{John met } y)]$

The analysis given in (2) is not a complete description for each of the particles listed above. A few additional remarks have to be made about E. *either, too* and G. *auch*. As already mentioned in the preceding chapter, *either* can be regarded as a suppletive form of *too, also* and *as well* that indicates wide scope over a preceding negation.

(4) a. You cannot eat THIS, as well/too,
b. You cannot eat THIS, either.

Evidence for this analysis is not only provided by the German translations of (4) a.–b., which differ only in the linear sequence of *auch* and *nicht* ('not'), but also by the fact that *either* can be replaced by *also* if the sequence of particle and negation is reversed. Sentences of this type do not seem to be used frequently, however:

(5) a. He did not talk to his mother-in-law, either,
b. He also did not talk to his mother-in-law.

For most speakers, *either* is only acceptable in sentences with overt negation (cf. Klima, 1964:265ff.). As Klima (1964) and Green (1973; 216ff.) have pointed out, however, some speakers also accept *either* after covert negatives like *seldom, hardly, scarcely, unlikely* or *doubt*. The contrast between the following two sentences is parallel to that found in (4):

(6) a. It is unlikely that John will come too.
b. It is unlikely that John will come either.

Too does not always contrast with *either* in such contexts with regard to its scope. This particle can also take wide scope over negation if it forms a tone group of its own. The following minimal pair is discussed in Green (1973:238):

(7) a. (Fred was convinced that John would come)/ But he doubted that ETHEL would show up too./
b. (Fred doubted that John would come)/ and he doubted that ETHEL would show up/ tóo/

The view that G. *auch* does not induce an ordering for its domain of quantification and contrasts in this respect with G. *selbst, sogar* or E. *even* is somewhat problematic for examples like the following:

(8) a. Gerechtigkeit kann man auch MÖRDERN nicht versagen.
'Justice cannot even be denied to murderers.'
b. Auch RIESEN haben klein angefangen.
'Even giants started from small beginnings.'

c. Es 1st auch nicht EINER gerettet worden.
'Not even a single person was saved.'
d. Wir spielen auch wenn ES REGNEN SOLLTE.
'We will play even if it should be raining.'

Sentences like these clearly have a scalar interpretation and the use of E. *even* as a translation of *auch* suggests that this interpretation is due to the particle.[2] Instead of postulating a scalar interpretation for cases like (8), in addition to a non-scalar one in straightforward examples like (9), it seems preferable, however, to ascribe the ordering effect in examples like (8) a.–d. to the context rather than to the particle itself:

(9) a. Auch IN HANNOVER wird eine U-Bahn gebaut.
'In Hanover, too, a subway is being built.'
b. Fritz verkauft auch AUTOS.
'Fred also sells cars.'

A comparison between (8) and (9) shows that *auch* is interchangeable with *selbst* or *sogar* whenever the focus expression denotes an extreme value and is thus suggestive of a scale. The foci in (8) a.–c. clearly denote such extreme values for the relevant predications and thus imply that the alternatives under consideration rank lower than the value given. The fact that *auch* usually has a scalar interpretation if it focuses on a conditional antecedent, by contrast, does not depend so much on the exact specification of that antecedent, but on the Gricean maxim of Relevance. If a conditional connection between two eventualities is asserted and presupposed, it is invariably the more remarkable case that is asserted. Thus, to take (8)d. as an example, it would be trivial to assert that the game in question will take place in good weather. This will generally be presupposed, as indeed it is in this example. As a consequence of this tendency to interpret the conditional antecedent in sentences like (8) d. as describing a circumstance more remarkable than the alternatives under consideration, the domain of quantification for *auch* will usually be a scale in such cases. In ascribing the ordering effect that we get in cases like (8) a.–d. to the specification of the focus, we avoid having to postulate ambiguity for *auch*. Unspecific

additive particles like G. *auch* that are compatible with both scalar and non-scalar contexts can be found in a wide variety of languages.[3]

The expressions that are used as additive focus particles in the sense described so far exhibit three further uses in a variety of languages, which will briefly be discussed now: (i) a use as conjunctional adverb, (ii) a use as coordinating conjunction and (iii) a use as components of quantifiers, notably 'free-choice' quantifiers.

Nearly all of the non-scalar additive particles listed above can be used as conjunctional adverbs, i.e. in the sense of 'moreover, furthermore':

(10) a. You must pack plenty of food for the journey. Likewise, you'll need warm clothes,
b. Also, many people fail to see that immediate action is required,
c. Goodrich had become much more manageable to his imagination: he was not the mystery man he had been. A man, too, had to earn his living. Goodrich did not do this and apparently could not (Taglicht, 1984:185).
d. Ich habe keine Zeit. Ebenso/auch fehlt es mir an Geld.
'I haven't got the time. Also I lack the funds.'

It is only in this use as conjunctional adverb that G. *auch* can occur in the forefield by itself (cf. (10)d.), a position that is generally permissible for *ebenso, gleichfalls* and *ebenfalls* 'likewise'.

The analysis given for additive particles in (2) clearly does not say very much about cases like (10). If we make the plausible assumption that in such sentences the focus is coextensive with the scope of the particle and comprises the whole sentence, the analysis in (2) would only imply for these cases that there is an alternative proposition under consideration. The essential point about the use of focus particles as conjunctional adverbs is the argumentative quality of the relevant sentences. This aspect of the meaning and use of focus particles can best be captured on the basis of Anscombre and Ducrot's (1983) ideas about the argumentative value of operators and connectives and on the basis of Blakemore's (1987) theory that certain adverbs and connectives should be analysed as instructions to process the containing sentence in a certain context. What additive focus particles do in sentences like (10), is to introduce another argument, in addition to that given in the preceding context, for the same conclusion. Or, to use Anscombre and Ducrot's terminology, the alternative proposition brought into the discussion by the conjunctional use of focus particles has the same argumentative orientation as the proposition expressed by the sentence containing the particle.

A closely related phenomenon is the affinity between additive focus particles and coordinating conjunctions. In many languages, the same expression can be used in both functions, i.e. in the sense of E. 'also/too' and in the sense of 'and'. Examples are Lat. *et (iam),* Gk. *kaí,* Russ. *i,* Norw. *og(så),* Lezgian *-ni,* Manam -

be, Zulu *na-,* Sesotho *le,* and Malayalam *-um*. This affinity may also show up in expressions of emphatic conjunction. English *both… and* corresponds to expressions whose literal translation is *too… too* in Amharic *(-mm…-m),* Turkish *(de…de),* Japanese *(mo …mo),* Mandarin *(ye…ye),* Hebrew and Kannada, to mention only a few examples (cf. Edmondson, 1978:309). Given that both additive particles and coordinating conjunctions link separate but parallel information to the preceding discourse, this relatedness in form is not really surprising. Examples like the following show that coordinating conjunctions like *and* and additive focus particles like *also/too* fulfil very similar functions and are often interchangeable (cf. Kaplan, 1984):

(11) a. Fred came and George came.
b. Fred came and George came, too.
c. Fred came and George did, too.
d. Fred came AND George did.

The similarity goes even further than this. Coordinated constructions usually have parallel foci, i.e. they are parallel in terms of their organisation into foreground and background (cf. Jacobs, 1988: 100f.):

(12) a. Mary came yésterday and Paul (came) todáy,
b. ?Mary came yésterday and Paul (came) qúickly.

This parallelism includes the requirement of a common integrator for the denotation of the foci (cf. Lang, 1984). If this requirement is not met, We get the effect called ‘zeugma’ in classical rhetoric. This common integrator is the exact counterpart of the presuppositional set, i.e. the domain of quantification, in the case of particles. On the basis of these parallels, Jacobs (1988) has argued that *and* should be analysed as a focus-sensitive operator.

Another striking fact about the distribution of the expressions serving as additive focus particles is their use as components of ‘indefinites’ or quantifiers. Of the different types of such quantifiers that can possibly be distinguished, only ‘free-choice’ quantifiers like G. *wer…auch (immer)* or D. *wie ook* ‘whoever’ will be considered here.[4] Such quantifiers typically derive from interrogative pronouns. The addition of focus particles to these pronouns is one of the six major strategies used in the world’s languages in the derivation of ‘free-choice’ quantifiers from other expressions. Reduplication (e.g. Lat. *quisquis*) and the addition of a verb form expressing volition (e.g. Lat. *quodlibet* ‘whatever’) are two further possibilities (cf. Coyaud and Aït Hamou, 1976). The languages that use additive particles as components of such ‘free-choice’ expressions include Armenian, Basque, Amharic, Dutch, Japanese, Korean, Lahu, Margi, Tibetan, Tagalog and Seneca. What is it that makes additive particles so suitable as components in the derivation of ‘free-choice quantifiers’ from interrogative pronouns?

Interrogative pronouns are often also used as existential quantifiers (cf. G.*Da kommt wer*—'There's somebody coming'). One result of combining interrogative pronouns with additive particles is to change such existential quantifiers into 'free-choice' quantifiers. Such expressions are typically used in free relatives and the complex sentences containing these free relatives are often analysed as conditional sentences of a certain type, i.e. as 'concessive conditionals'. At first sight, free-choice quantifiers simply express universal quantification in such constructions, just like *every:*

(13) a. She looks pretty whatever she wears,
b. Whoever did this will be punished,
c. Whatever I say, he doesn't listen to me.
d. You can come whenever you want.

Examples like these show that free-choice quantifiers do indeed express some kind of universal quantification, but they also show that this quantification corresponds more to that expressed by *any* than to that expressed by *all* or *every*. Free-choice quantifiers lack the restriction to a contextually given universe of discourse in their domain of quantification. Apart from the 'sortal' restriction expressed by the 'interrogative pronoun' *(who, what, when, how)* and the restriction imposed by the sentential frame, free-choice quantifiers are unrestricted in their domain of quantification. A further point of similarity between *any* and free-choice quantifiers like *whatever, whoever,* which differentiates them from universal quantifiers like *all, every, each,* seems to be that they operate over a structured domain of quantification. To justify this assumption, we can first of all appeal to intuition. It is well in line with our intuitions about sentences like (13) that the domain of quantification is a (partially) ordered rather than an unordered set. The exact nature of the order is, of course, determined by the context. In (13)a., for example, it could roughly be expressed by a pair of antonymous adjectives like becoming— unbecoming. Secondly, the ordering can in fact be made explicit as in the following example:

(13) e. She looks pretty whatever she wears, be it jeans or an evening dress.

Finally, sentences like (13)a. have paraphrases in which both extremes (cf. (14) a.) or one extreme point of the relevant scale are given:

(14) a. She looks pretty whether she wears jeans or an evening dress,
b. She looks pretty even if she wears jeans.

If this analysis of concessive conditionals like (13) and of free-choice quantifiers like G. *wer…auch (immer)* 'whoever', or *was… auch (immer)* is correct, the

question arises, of course, whether this interpretation as 'free-choice quantification over a structured domain' is the compositional result of the interrogative component and the focus particle. Even if it is not possible to give a straight affirmative answer to this question, it is certainly obvious that the meaning of free-choice quantifiers is motivated by the components of such expressions. As pointed out above in connection with (8), additive particles may be used in scalar contexts and it is also plausible to assume that frequent use in such contexts may have an influence on their meaning. It is precisely such a scalar use of additive particles that seems to provide the basis for the development of free-choice quantifiers like *wer… auch (immer)* in German and many other languages.

4.2.
SCALAR ADDITIVE PARTICLES

In addition to the simple inclusive particles discussed in the previous section, many languages have more specific inclusive particles which always induce an order for the set of values under consideration. These 'scalar additive particles', as we will call them, carry the simple existential presupposition described in the preceding section, but also involve a more specific, scalar 'conventional implicature'. Given this close relatedness between simple inclusive particles and scalar ones, it is to be expected that not all languages have such a lexical distinction. In many of the seventy languages that this study is based on, an unspecific additive particle like G. *auch* seems to do duty in both scalar and non-scalar contexts. A fairly large number of languages in my sample, however, do have a lexical distinction parallel to that between E. *also/too* and *even*. Here are some examples:

(15) G. *auch—sogar, selbst;* Fr. *aussi—même, voire;* Finnish *(-kin), myös—jopa, vieläpä;* Turkish *-de—bile;* Russ., *tože, takže—daže;* Pol. *tez—nawet;* Sp. *también—incluso, hasta;* D. *ook—zelfs;* Hebrew *gam—afilu;* Persian *ham—hatta;* etc.

4.2.1
The meaning of *even*

There is general agreement in the extensive literature on *even* and its counterparts in other languages that this particle does not make a contribution to the truth conditions of a sentence. On the other hand, this expression is certainly associated with specific conditions for its use, i.e. conditions that have to be met if the containing sentence is to be uttered felicitously. There is also general agreement that these presuppositions or conventional implicatures of *even* partly overlap with those of additive particles like *also* or *too*. In contrast to E. *also* or G. *auch,* however, *even* (as well as its counterparts in other languages) induces

an ordering or scale into the interpretation of the containing sentence. In other words, *even* is both an additive and a scalar particle. In terms of the simplified notation developed above, this general agreement in the analysis of *even* can roughly be summarised as follows:

(16) a. even (λ x(α), β)
b. $(\exists x)\ [(x \neq \beta)\ \&\ \alpha(x)]$
c. Max_c [λ x(α), β]

(17) a. Even the President came.
b. $(\exists x)\ [(x \neq \text{the President})\ \&\ \text{came}(x)]$
c. Max_c (λx(x came), the President]

Since a clear distinction is drawn in this book between presuppositions and conventional implicatures, only (16)b. and (17)b. are regarded as presuppositions, whereas (16)c. and (17)c. are analysed as conventional implicatures for the reasons given in Chapter 3 (cf. 3.6.). The 'point of view' uncertainty generally displayed by *even* in sentences embedded after *verba dicendi* and *verba sentiendi* can clearly be observed in the following example (from Kay, 1987):

(18) The warden told the guard to let even JONES through the gate.

The belief that Jones is the most dangerous prisoner can be attributed by this sentence either to the warden or to the speaker/hearer.

After this brief sketch of those aspects in the analysis of *even* and related expressions on which there is widespread agreement, let us turn to the controversial issues. There is no general agreement as to the manner in which the constraint on the domain of quantification should be expressed and, above all, as to the exact nature of the structure imposed by *even* on the domain of quantification. Does *even* induce a specific scale or is the nature of the scale determined by the context? This question is answered very differently by the relevant analyses. In his seminal paper on the meaning of *only* and *even,* Horn (1969) analyses *even* as standing in polar opposition to *only*. Both particles have scalar and non-scalar readings, but the exact nature of the scale is not specified by the particles themselves. According to Fauconnier (1975a, 1975b), *even* identifies the lowest point of some contextually given scale. Taken at face value, this claim runs into difficulties with examples like the following, as pointed out by Kay (1987):

(19) Not only did Mary win her first round match, she even made it to the quarter finals.

But even if 'lowest point on some scale' is replaced by 'end of some scale', the claim is difficult to maintain, unless it is assumed that the final is not among the alternatives under consideration in a context where (19) is uttered. That scalar additive particles like E. *even* or G. *selbst* and *sogar* do not determine the exact nature of the ordering in the relevant sentences is also the view expressed in Jacobs (1983: 144ff.). *Sogar*—the German counterpart of *even* in affirmative-polarity contexts—only characterises its focus value as ranking high, the exact specification of the scale varies with the context.

In contrast to the analysis summarised so far, the analyses to be considered now postulate a more specific meaning for *even* and its counterparts in other languages. It is assumed, in particular, that the scale along which the focus value and the alternatives under consideration are ordered is partly characterised by the particle and not by the context alone. A widely quoted analysis along these lines is the one given in F. and L.Karttunen (1977) and Karttunen and Peters (1979). According to this analysis, *even* characterises the value of its focus as the least likely, among the values under consideration, to satisfy the propositional schema expressed by the clause in its scope. The following example provides illustration for this analysis:

(20) a. Even the President came.
b. $(\exists y)[(y \neq \text{President}) \& \text{came}(y)]$
c. $(\forall y)[(y = \text{the President}) \& \text{came}(y) \rightarrow \text{exceed}(\text{likelihood}(\text{came}(y)), \text{likelihood}(\text{came}(\text{the President})))]$

This analysis has a high degree of plausibility for the examples mentioned so far, as well as for examples like the following:

(21) a. John even INSULTED Mary.
b. Even if NOBODY helps me, I'll manage.
c. Even BEFORE the pact, Nazi Germany saw Trotsky as a threat,
d. Even the FAINTEST noise bothers my uncle.

Insulting is certainly a very unlikely form of behaviour towards women, just as 'no help' is the least likely form of 'cooperation' leading to success. Moreover, this analysis accounts for some of the intuitions that have led other descriptions in different directions. The 'faintest noise' is certainly the lowest level of noise as Fauconnier (1975a, 1975b) pointed out. On the other hand, it is the highest value on the Horn scale that is determined by the propositional schema 'the x noise bothers my uncle'. Finally, the analysis proposed by F. and L.Karttunen and Karttunen and Peters also accounts for the observation frequently made in

the literature that sentences with *even* express surprising states of affairs, i.e. things one would not have expected. If the most unlikely value of a set of alternatives satisfies a propositional schema this may indeed be unexpected and cause surprise.

There are, however, two weak points that make the analysis proposed by F. and L.Karttunen (1977) and Karttunen and Peters (1979) less than fully convincing. First, it is difficult to accept that among all the possible orders, scales of likelihood should play such an important role in human communication that this fact has left its imprint on the lexical structures of a wide variety of languages. Secondly, the analysis does not fit certain types of examples as, for instance, the following (cf. Kay, 1987):

(22) a. George drank a little wine, a little brandy, a little rum, a little calvados, and even a little armagnac,
b. All the children were very hungry. Peter had two hamburgers, George ate three and Fred, our glutton, even ate four.

In (22)a. 'armagnac' is not characterised as being a more unlikely beverage for George to consume than the others. A much more plausible interpretation for this sentence is one in which a list of beverages that includes armagnac in addition to four others is contrasted with a list that only includes the other four. In (22)b., on the other hand, the characterisation of Fred as 'glutton' does not make it unlikely that he would eat more than the others.

Anscombre and Ducrot (1983), regard scales as generally belonging to a separate, argumentative dimension of language that may have very little or nothing at all to do with semantic content. The ordering brought into play by *même,* the French counterpart of *even,* is analysed as involving argumentative strength. The sentence or clause containing *même* always expresses the stronger argument for a conclusion than a contextually given proposition. In (21)b., for instance, the conditional with *even* can be used as a stronger argument for the conclusion 'the speaker is doing a great job' than a sentence containing an alternative expression for the focused item *nobody*. The most problematic part of this analysis, which certainly has made a contribution to our understanding of the meaning and use of scalar additive particles, is the view that there is a separate argumentative dimension of language, which may be different or even totally opposed to the semantic content. This view has been rejected by many semanticists, notably G.Fauconnier and P.Kay.[5]

P.Kay's recent analysis of *even* (cf. Kay, 1987) incorporates insights of all the analyses summarised so far and is furthermore remarkable for his unorthodox views on the semantics-pragmatics interface. According to Kay, *even* indicates that the clause in which the particle occurs expresses, in context, a proposition (the 'text proposition') which is more informative or 'stronger' than some particular distinct proposition (the 'context proposition') taken to be already in the context. The Gricean notion of Informativeness is explicated in terms of a set-

theoretic construct: a scalar model. Given a scalar model SM containing two distinct propositions 'p' and 'q', 'p' is more informative than 'q' iff 'p' entails 'q'. A scalar model is defined, very roughly, as a set of propositions which are ordered along two or more dimensions. The dimensions are the result of the interaction between particle and focusing and their number depends on the number of foci in a sentence. The propositions, i.e. one of the elements of the quadruple making up the scalar model, are ordered in terms of (unilateral) entailment: if a proposition 'p' has a higher value than some distinct proposition 'q' on dimension 'D_1' and the same value in another dimension 'D_2' (or on all other dimensions), 'p' entails 'q' in this scalar model. A scalar model is interpreted empirically as a set of background assumptions shared by speaker and hearer at the time of utterance, but may also be attributed, as in (18), to the mind of someone whose thoughts are reported.

Consider now an example like the following in the light of Kay's analysis:

(23) a. (Peter's Spanish is coming on nicely.) He can even conjugate the IRREGULAR verbs.
b. Peter can conjugate the irregular verbs.

A plausible candidate for the context proposition of (23)b., the text proposition of (23)a., is the proposition expressed by (23)c.:

(23) c. He can conjugate the regular verbs.

According to Kay, the proposition expressed by (23)b. is more informative than (23)c. since the former entails the latter in the scalar model in which (23)a. is interpreted. Now, (23)b. does not 'entail' (23)c. in the usual sense of the word, since we can easily think of a situation in which the former is true and the latter is false. As pointed out by Fauconnier (1975a, 1975b), scales are generally pragmatic rather than semantic in nature. And it is precisely for this reason that Kay relativises the entailment relation between text proposition and context proposition to scalar models. In doing this, Kay also relativises the notion of 'truth', which is essentially involved in the definition of entailment, to conceptual systems, i.e. 'to the contents of actual or potential minds'.

The similarities between Kay's analysis and the analyses of *even* summarised above, or the general framework developed in Chapter 3 for that matter, are clear enough. Kay's dimensions correspond to the orders induced by the interaction between particle and focusing, his context proposition corresponds to the existential presupposition triggered by all additive particles and his relationship of unilateral entailment and greater informativeness corresponds to the evaluations attributed to the value of its focus by a particle in many of the other analyses. On the other hand, Kay's analysis differs from all earlier analyses of *even* and similar scalar particles in interesting ways and appears to be the most adequate analysis proposed so far, for the following reasons. First, *even* interacts,

according to Kay, with the Gricean maxim of Quantity. The view that propositions are ranked in terms of informativeness and that this tendency is reflected in lexical contrasts in a large number of languages is certainly more plausible than alternative views discussed above. Secondly, the framework developed by Kay is general enough to accommodate all the properties that are peculiar to focus particles like *even:* this particle may be associated with more than one focus, its focus may be co-extensive with its scope, e.g. in all-new utterances or in cases of phrasal scope and it does not only combine with nouns to form 'generalised quantifiers'. All of the properties receive a general and elegant treatment in Kay's analysis, which furthermore incorporates the important insights of earlier analyses. Finally, in attributing to *even* a ranking of propositions in terms of informativeness and in explicating this latter notion as unilateral entailment in a scalar model, Kay has made an important contribution to recent discussions of the semantics-pragmatics interface. The semantic concept of truth serves as an essential atomic concept in Kay's analysis of the 'non-truth-conditional' meaning of *even*.

So far we have only considered examples where *even* occurs in affirmative-polarity contexts. Everything said so far cannot simply be extended to negative-polarity contexts,[6] however, because sentences with *not even* are not straightforward negations of the corresponding sentences without *not* (cf. (24)) and *even* manifests ambiguity in negative-polarity contexts other than overt negation (cf. (25)):

(24) a. Not even JOHN managed to solve the problem.
b. Even JOHN managed to solve the problem.
(25) Can he even speak FRENCH?

In (24)a. the person identified as John is characterised as very intelligent, whereas *even* has the very opposite effect in (24)b. Therefore, (24)a. cannot simply be the normal negation of (24)b. The problem posed by negative-polarity contexts other than overt negations is ambiguity: a question like (25) could be asked of a gifted schoolchild, whose ability to speak French in addition to other foreign languages is considered as remarkable. Alternatively, (25) could be asked in reference to a candidate for the job of Romance linguist to find out whether he meets the most basic requirement (cf. Kay, 1990). We should also briefly note at this point that the two interpretations of (25) are kept apart by different translations in German (*sogar* vs. *auch nur*) and that *not even* also has a special translation in German *(nicht einmal)* and in fact in all Germanic languages.

How can we account for the ambiguity of *even* in sentences like (25) and the relationship between *even* and *not even* in sentences like (24)? Two solutions have been proposed for this problem. F. and L.Karttunen (1977), Karttunen and Peters (1979), and Kay (1990) have argued that *even* always takes wide scope over an immediately preceding *not* and that *even* may take wide or narrow scope in negative-polarity contexts.[7] The former of these two claims is supported by

the fact that sentences with *not even* like (24)a. can be paraphrased by sentences in which the order of the two operators is reversed:

(24) c. It is even the case that JOHN did not manage to solve the problem.

Such an analysis is also perfectly compatible with the fact that a plausible context-proposition for (24)a. is a negative sentence in which the focused name 'John' is replaced by the name of a person with less intelligence. If Peter is such a person, (26)a. would then indeed entail (26)b. in a scalar model, as is predicted by Kay's analysis:

(26) a. John did not manage to solve the problem,
b. Peter did not manage to solve the problem.

Moreover, given the similarity in form between (24)a. and (24)b., the former sentence can plausibly be regarded as some 'negative version' of the latter. Evidence for the claim that *even* may take wide or narrow scope in negative-polarity contexts other than an immediately preceding *not* is provided by paraphrases in which *even* is shifted to a position preceding the negative-polarity context:

(27) a. I refused to even TALK to Bill,
b. I even refused to TALK to Bill.

Minimal pairs like the following, which differ only in the order of the conjuncts, could be analysed as follows:

(28) a. Mary was not allowed to write to her husband or even SEE him.
b. Mary was not allowed to see her husband or even WRITE to him.

The first member of the pair can be regarded as an instance of narrow scope within the non-finite clause, i.e. 'for Mary to see her husband' is evaluated as more informative and as entailing 'for Mary to write to her husband' in the relevant scalar model. The second example, by contrast, can be analysed as a case of wide scope, i.e., 'Mary was not allowed to write to her husband' is the text proposition and 'Mary was not allowed to see him' is the less informative context proposition.[8]

This analysis is rejected in Rooth (1985) for several reasons. Since all of Rooth's arguments crucially rely on subtle judgements concerning the meaning of certain sentences with *even,* as well as on certain details of his analysis of focus particles, they will not be summarised here. Instead we will simply look at Rooth's own solution for the problems mentioned above. According to Rooth, the ambiguity of examples like (25) and the contrast in examples like (28)a.–b. is not a result of different scope assignments, but the result of a lexical ambiguity

between 'normal' and negative-polarity versions of *even* (*even* vs. *even*$_n$). If we follow Karttunen and Peters (1979) in attributing to *even* a ranking in terms of likelihood, the difference between the 'normal' focus particle *even* and the negative-polarity item *even*$_n$ can be described as follows: the value of the focus of *even*$_n$ is characterised as the least unlikely or most likely value to satisfy the open sentence in its scope, which does not include the negative-polarity context. The existential presupposition or context proposition associated with *even*$_n$ is a negative one. Thus in an example like (29)a. the context proposition would be something like (29)b. and *notice* would be evaluated as most likely value for embedded sentences in the scope of *even*$_n$:

(29) a. I was out of the room before Bill had even NOTICED me.
b. Bill had not talked to me.

That the polarity of a sentence is relevant for the interpretation of *even*$_n$ is seen by Rooth as a consequence of the effect that affirmative and negative-polarity contexts have on the ordering among a set of values in a propositional schema (cf. note 7). A similar view can be found in Jacobs (1983). Jacobs (1983:226ff.), who rejects the analysis that the German counterparts of *even* may take wide scope over negative-polarity contexts, points out that as a result of the scale reversal brought about by negative-polarity contexts, and evaluation as 'high', 'maximal' or 'most unlikely' in a negative-polarity context 'τ' is equivalent to an evaluation as 'low', 'minimal' or 'most likely' in an affirmative context and vice versa:

(30) $\mathbf{Max}\ (\lambda\, x(\alpha), \beta) \equiv \mathbf{Min}\ (\lambda x[\tau(\alpha)], \beta)$

And it is because of the equivalence of such complementary evaluations that we get the similarity and near-equivalence between pairs like (27)a.–b.

The question as to how *even* should be analysed in negative-polarity contexts must still be considered an open question. The two views summarised above have yet to be proved capable of accounting for all awkward data and the consequences that each analysis would have for the analysis of related areas have yet to be assessed and compared. Since this chapter has no substantial contribution to make to this controversy, the matter will simply be left undecided.

4.2.2.
Further lexical differentiations

From a comparative point of view, both of the opposing views discussed above are plausible. A considerable number of languages in the sample on which this book is based have different counterparts for *even* in affirmative and negative-polarity contexts and thu s provide support for the view that two, if related,

meanings should be distinguished for *even*. In some cases only two lexical items are distinguished, one of which only occurs in negative-polarity contexts: e.g. Span, *incluso (hasta)* vs. *siquiera* (neg.-pol.); Finn. *jopa* vs. *edes* (neg.-pol.). Germanic languages other than English typically have a three term contrast: an expression which is more or less unrestricted in its distribution (e.g. G. *sogar, selbst*; D. *zelfs*; Norw. *til og med*), an expression only found in negative-polarity contexts (G. *auch nur;* D. *ook maar*: Norw. *i del hele tatt*) and an expression restricted to the environment of an adjacent negation (G. *nicht einmal*; D. *niet eens*; Dan. *ikke engang*).

The situation found in English seems to be just as frequent, however. Many languages have a lexical item that is just as versatile as E. *even* and occurs in both affirmative and negative-polarity contexts with the interpretations described above. Examples are F. *même,* Jap. *mo,*[9] Indonesian *-pun,* Tagalog *man,* Hindi *bhi,* Russian *daže,* Margi *kwá,* Latvian *pat,* Alban. *edhe,* Pol. *nawet,* Mandarin *(lian)…ye/dou, e*tc. This situation gives more support to the view that there is only one meaning and that ambiguities such as the ones observed above are due not to polysemy, but to other factors such as scope. The following examples show that F. *même,* Russ. *daže* and Mandarin *(lian)… dou/ye* are just as versatile in their distribution and interpretation as *even*. In each case an affirmative context, a negative-polarity context without overt negation in the same clause and an adjacent overt negation have been selected as context:

Russian (31) a. Daže Ivan znaet ob ètom.
'Even Ivan knows of this.'
b. Daže on n'e znaet ob ètom.
(even he not knows of this)
'Not even he knows of this.'
c. Ja n'e dumaju, što daže Ivan rešit etu zadaču.
(I not think that even Ivan will-solve this problem)
'I don't even think that Ivan will solve this problem.'

French (32) a. Même le roi de France est sage.
'Even the King of France is wise.'
b. Elle ne savait même pas écrire une lettre.
'She did not even know how to write a letter.'
c. Avec Alain, nous étouffions, sans même la consolation de le voir partir pour son bureau.
'With Alan we were suffocating, without even the consolation of seeing him leave for his office.'

Mandarin (33) a. lian Mali ye lai kan Zhang San.
(even Mali also come see Zhang San)
'Even Mali came to see Zhang San.'
b. ta lian chang ger dou bu hui.
(he even sing song all not can-do)
'He doesn't even know how to sing.'

c. ta lian xiang dou mei xiang jiu huida-le.
(he even think all not think then answer-Perfective)

'He answered the question without even thinking.'
(cf. Paris, 1989)

In addition to manifesting a lack of lexical contrast in the area under investigation, the three languages have a feature in common which distinguishes them from English: the focus particle precedes a negation in the same clause in all three cases, provided of course that *pas* rather than *ne* is taken to be the marker of negation in French.

The preceding remarks about English, French, Russian, etc. should not be taken to imply that these languages totally lack lexical differentiation in the notional area under discussion. What we have tried to show is that these languages have one lexical item (*even, même,* etc.) that can be used in all affirmative and negative-polarity contexts with the interpretations discussed in the preceding section. Some of the languages put into one group with English have further expressive devices that are restricted to one of these contexts. The expression *so much as* in English is a case in point. The following examples show that it is a genuine negative-polarity item like G. *auch nur:*

(34) a. Probably the majority had not so much as heard of Roger Quaife. (C.P.Snow, *Corridors of Power*)
b. It occurred to me that he had not given me a clue, not so much as a hint, why he was so insistent on talking to Roger that night. (C.P.Snow, *Corridors of Power*)
c. It appeared that I had to make sure that there was no resemblance, to be convinced that anyone I so much as thought of was totally unlike her. (C.P.Snow, *Homecomings*)

Let us now take a closer look at one of the languages which systematically differentiate two or more scalar additive particles according to the polarity of the sentence in which they occur. In German, a language with a particularly rich inventory of focus particles, as many as eight lexical items have to be used as translations of E. *even* in various contexts. So, in order to discuss some of the factors to which the lexical differentiation in the notional domain under discussion may be sensitive, we will now take a detailed look at the relevant lexical items in German. This will also enable us to confront the analyses presented above with a richer inventory of data than is normally used. The possible counterpart of *even* in German, as well as the factors which determine the choice between them, are illustrated by the following examples:

(35) (E.) He even insulted her.

(G.) Er hat sie *sogar* beleidigt.

(36) (E.) Even if nobody helps us, we'll manage.
(G.) *Selbst* wenn uns niemand hilft, schaffen wir es.

(37) (E.) He didn't even talk to me, let alone help me.
(G.) Er hat *nicht einmal* mit mir gesprochen, geschweige denn mir geholfen.

(38) (E.) Now it turns out that it is doubtful whether even two out of five Scotsmen harbour this strange enthusiasm.
(G.) Nun zeigt es sich, daß es zweifelhaft ist, ob *auch nur* zwei von fünf Schotten diese seltsame Begeisterung zeigen.

(39) (E.) Was this even true?
(G.) War das *überhaupt* wahr?

(40) (E.) Even before the pact Nazi Germany saw Trotsky as a threat…
(G.) *Schon* vor dem Pakt sahen die Nazis Trozki als Bedrohung an.

(41) (E.) One executive of J.H.J. said that his company was hoping for arms export orders, a statement which would have been impossible in Japan even a year ago. (*New Statesman,* 8 September 1978, p. 287)
(G.) …eine Aussage, die *(sogar) noch* vor einem Jahr in Japan unmöglich gewesen wäre.

(42) (E.) External reserves at the end of 1976 stood at the embarrassing, even dangerous, level of…
(G.) Der Vorrat as ausländischen Devisen hatte Ende 1976 den peinlichen, *ja sogar* gefährlichen Stand von…

The choice between *sogar, selbst, ja sogar, noch* and *schon* as translational equivalents of *even* is primarily determined by the kind of focus the particle relates to. *Sogar* and *selbst* overlap in their distribution, but only *sogar* can be used if the focus expression is an adjective, a verb or a quantifier. One reason for this restriction in the use of *selbst* seems to be the fact that this expression is also used as an emphatic reflexive corresponding to E. *-self*. Only in combination with a nominal or a sentential focus is it possible to differentiate the particle use of *selbst* from the use as a reflexive pronoun clearly (cf. Edmondson and Plank, 1978). The inability of *selbst* to focus on a quantifier is also a consequence of the fact that this particle cannot be used in cases where the focus value and the alternatives under consideration are not disjoint:

(43) Er hat die Prüfung sogar (*selbst) viermal wiederholt.
'He has repeated the exam as many as four times.'

Examples like (42) are instances of a metalinguistic use of *even* (cf. Horn, 1985a: 150). In such cases, the alternatives under consideration are other formulations. In French, *voire* is primarily used in this function

(44) Ce remède est inutile, voire dangereux.
'This medicine is useless, even dangerous.'

In German, *ja (sogar)* is the only possible choice in these cases.

The use of *noch* and *schon* in examples like (40) and (41) is based on the primary use of these expressions as aspectual sentence adverbs, in the sense of E. 'still' and 'already'. These focus particles are used as translations of *even* if a temporal expression is chosen as focus and either all alternatives under consideration precede the value given *(noch)* or all alternatives follow the value specified in the focus *(schon)*. By extension, these particles may also be used for non-temporal scales which exhibit an analogous ordering.

(Nicht) einmal, auch nur and *überhaupt* are the German counterparts of $even_n$. *Nicht einmal* is an inseparable combination of two words and has by and large the same distribution as other particles. Therefore this expression is best analysed as a complex focus particle and its meaning can roughly be analysed as follows (cf. Jacobs, 1983:246):

(45) a. Nicht einmal Fritz will mir helfen.
'Not even Fred is willing to help me.'

b. —(Fritz will mir helfen)

c. $(\exists x)[(x<\text{Fritz}) \& \neg (x \textit{ will } \text{mir helfen})]$

d. Min_c (λx[x will mir helfen], Fritz)

A sentence with *nicht einmal* entails the corresponding sentence without *einmal*. Furthermore, it presupposes that a relevant alternative to the focus value (i.e. a person less cooperative than Fritz) satisfies the open sentence obtained by omitting *einmal* and replacing the focus expression by a variable. The focus value is characterised as 'minimal' for the affirmative counterpart of this open sentence. Translated into Kay's framework, (45)c. represents the context proposition of (45)a. and is thus entailed by (45)b, in the relevant scalar model.

In all downward-entailing contexts other than overt negation, E. *even* typically corresponds to the complex particle *auch nur* or to *überhaupt* in German. The following examples are cases in point:

(46) a. Ich handle lieber spontan als auch nur EINE WOCHE im voraus zu planen.
'I'd rather do anything on the spur of the moment than plan even a week ahead.'

b. Bevor ich ihn auch nur BEGRÜSSEN konnte, brüllte er mich an.
'Before I could even say hello, he was shouting at me.'

c. Er weigerte sich, den Schaden auch nur ANZUSEHEN.
'He refused to even look at the damage.'

The only gap in the distribution of this complex particle—it cannot occur adjacent to *nicht* 'not'—is filled by *nicht einmal:*

(47) Er hat mich nicht einmal (*nicht auch nur) BEGRÜSST.
'He did not even say hello.'

The complex particle *auch nur* has one peculiarity, however, which makes it somewhat different from *even* in negative-polarity contexts, i.e. from Rooth's $even_{n}$. In contrast to $even_{n}$, *auch nur* requires that the value of its focus is a minimal value among the alternatives under consideration, not only on the scale determined by the context in the scope of the particle, but also in an absolute sense of the word. The relevant constraint can best be explained with an example: *auch nur* cannot be used in examples like (49), even though *nicht einmal* is acceptable in the corresponding sentences with an overt negation:

(48) Er war nicht einmal mit EINER MILLION DM zufrieden.
'He wasn't even content with one million DM.'
(49) Es ist zweifelhaft, ob er (*auch nur) mit EINER MILLION DM zufrieden ist.
'It is doubtful whether he will be content even with one million DM.'

The alternatives under consideration are obviously smaller amounts of money than the value given. In other words, the context proposition of (49) is something like 'He won't be content with less than a million Deutschmarks'. But, -given the current value of the Deutschmark, the amount specified in (49) is by no means a small amount in the absolute sense of the word, i.e. on the basis of a ranking established independently of the current context or scalar model. *Auch nur,* so it seems, can only be used if the value of the focused expression is a low value in absolute terms. That constraints of this kind are not an isolated phenomenon is shown by the expression *auch nicht* ('also not'), which may be substituted for *nicht einmal* 'not even' whenever the value of the focus is a genuine minimal value in absolute terms. In other words, *auch nicht* is fine with a noun phrase as focus containing the numeral 'one', but not in other cases. The second of the following two examples sounds very odd:

(50) a. Ich habe auch nicht EINE MARK ausgegeben.
'I haven't even spent one single mark.'
b. ?Ich habe auch nicht SECHS MARK ausgegeben.
'I haven't even spent six marks.'

It will be shown that such ranking in terms of 'natural' or 'absolute' scales also plays a role in the meaning of certain exclusive particles in English.

As a consequence of this constraint on the use of *auch nur,* this particle is also incompatible with contexts like the following, where *überhaupt* is a good translation of *even:*

(51) (E.) Was this even TRUE?
(G.) War das überhaupt wahr?
(52) (E.) WERE they even his in-laws ANY LONGER?
(G.) Waren sie überhaupt noch seine Schwiegereltern?
(53) (E.) I was out of the room before he had even NOTICED ME.
(G.) Ich hatte das Zimmer verlassen, bevor er mich über haupt bemerkt hatte.

In cases like these the focus value is not analysable as a 'minimal' value on the basis of an order that is independent of a particular context. The order that is relevant for these cases can hardly be described in terms of likelihood or entailment in a scalar model. Rather, the focus value denotes a prerequisite for the alternatives under consideration in such cases.

4.2.3.
Scalar additive particles in conditional and concessive sentences

The use of *even* and similar scalar particles in conditionals deserves special mention, since these particles identify a special type of conditionals ('concessive conditionals'), which, moreover, may develop into concessive sentences.

If *even* precedes a conditional antecedent it may either focus on the whole antecedent or some part of it:

(54) a. The game will be on even if IT IS RAINING.
b. I'll manage even if EVERYBODY is against me.

The scope of the particle is invariably the whole conditional in these cases, irrespective of the exact location of the focus. According to the analysis given above for *even,* such sentences presuppose that there is a contextually relevant alternative, i.e. another antecedent, which satisfies the conditional relation, and evaluate the antecedent as an extreme (highly unlikely, very informative) candidate for the prepositional schema 'if x then q':

(55) a. Even (λx[if x then q], p)
b. $(\exists x)[(x \neq \beta)\ \&\ (\text{if } x \text{ then } q)]$
c. Max_c (λx [if x then q], p)

What *even* does in sentences like (54) is thus to specify a series of antecedents for a conditional schema and to rank them along a scale of likelihood, strength, etc. The conditional relationship is asserted to hold for an extreme (i.e. most unlikely) case and thus also for less extreme cases. As a consequence, the overall effect of such sentences is to assert the irrelevance of a certain parameter (e.g. the parameter 'weather' in (55)a.) for the eventuality described in the main clause. And this analysis in terms of the general framework developed in Chapter 3 is, of course, easy to translate into an analysis along the lines of Kay (1990): a conditional introduced by *even* expresses the speaker's opinion that the proposition expressed is more informative than another conditional proposition taken to be present in the context. In a case like (54)a., the following conditional is a plausible candidate for the context proposition that is entailed by (54)a. in the relevant scalar model:

(56) The game will be on if the weather is fine.

If *even* occurs inside a conditional antecedent, we get two possible interpretations ('auch nur' vs. 'sogar' in German), just as in the interrogatives discussed above. The more frequent interpretation and the only plausible one for examples like the following is the one where *even* corresponds to *auch nur* in German and can be replaced by *so much as:*

(57) a. If you drink even/so much as A DROP OF ALCOHOL, your boss will fire you.
b. If the R. administration finds solutions even to SOME of the problems, it will have established its credibility.

Here we meet again the problem of analysing *even* either as having the usual interpretation and as taking wide scope over the whole conditional or as a negative-polarity item that takes scope only within the antecedent and expresses the opposite evaluation from that expressed by *even* in affirmative contexts. Note that only the former of these two views is compatible with Kay's analysis. The proposition expressed by (57)a. without particle, repeated here as (58)a., can plausibly be analysed as entailing (58)b. in a scalar model and as more informative as a result:

(58) a. If you drink a drop of alcohol, your boss will fire you.
b. If you drink half a bottle of alcohol, your boss will fire you.

The alternative analysis, proposed *inter alia* by Rooth (1985), according to which *even* is a negative-polarity item in (57), cannot be subsumed under Kay's theory. If the scope of *even* is indeed narrow in (57)b. and if the focus value of *even* is evaluated as ranking low in such cases, it is the context proposition that entails the text proposition rather than the other way round:

(59) a. You drink a drop of alcohol.
b. You drink half a bottle of alcohol.

But neither overt negations nor conditionals provide decisive evidence for or against one of these two hypotheses. What conditionals with *even* do show, however, is that such scalar additive particles may in fact be moved into conditional antecedents. As pointed out in Bennett (1982), we often find sentences like (60)b. alongside (60)a.:

(60) a. Even if he drank just A LITTLE, his boss would fire him.
b. If he drank even just A LITTLE, his boss would fire him.

The two particles *even* and *just* interact with the same focus in such cases, but take different scope. The effect that *even* and *just* have on the meaning of (60)a., however, is more or less the same: an evaluation as maximal for the whole conditional as signalled by *even* is more or less equivalent to an evaluation as minimal within the antecedent as expressed by *just*. Sentences like (60)b. can probably be regarded as the result of a tendency to bring a focus particle as close to its focus as possible. What makes these sentences interesting is the fact that they throw some light on the possible development of complex particles like G. *auch nur* and D. *ook maar*. The juxtaposition of an additive and exclusive particle is a very peculiar phenomenon, given that there is a good deal of incompatibility between the meaning of the two groups of particles. But given that wide-scope G. *auch,* which may have a scalar interpretation, has more or less the same effect in a conditional as narrow-scope *nur* and given a tendency to shift particles to their focus, structures like (61)a. may be assumed to have provided the historical source for (61)b.:

(61) a. Auch wenn du nur EIN GLAS trinkst, fahre ich mit dem Taxi nach Hause.

b. Wenn du auch nur EIN GLAS trinkst, fahre ich mit dem Taxi nach Hause.
'Even if you drink just one glass, I'll go home by taxi.'

Seen from a more general grammatical perspective, conditionals introduced by scalar additive particles can be analysed as one type of concessive conditionals, of conditionals, that is, in which a consequent is related to a series of antecedent conditions. By asserting a conditional relationship for an extreme case, *even if* conditionals also 'assert' the conditional relationship for less extreme cases. Such a series of antecedent conditions can also be specified by a disjunction, by an enumeration or by a quantification. Conditionals introduced by *even* can thus be grouped together with structures like the following:

(62) a. Whether he turns up or not, I will begin with the project tomorrow,
b. If deer, or wolf, or fox were abroad that night, I never saw them,
c. Whatever he says, no one pays any notice.

Even if conditionals frequently develop into concessive sentences. In fact, concessive conditionals provide one of the five major historical sources for the development of concessive sentences. In a wide variety of languages, concessive connectives are composed of a (former) conditional or temporal connective and an additive particle like E. *even* or G. *auch* (cf. König, 1985; 1988). Here are a few examples:

(63) E. *even though, even so;* G. *wenn…auch, wenngleich, obschon, obgleich;* Lat. *et-si;* Fr. *quand-même,* Norw. *selv om;* Finnish *jos-kin* 'if-also'; Bengali *jodi-o* 'if-also'; Zulu *noma* (*na* 'even'+*uma* 'if'); Malayalam *-enkil-um* 'even if'; Abkhaz conditional+g' ҙ 'even', etc.

The common property which makes such a development from concessive conditionals to genuine concessives plausible is a conventional implicature of general incompatibility between 'antecedent' and 'consequent'. In sentences of type (54) or (57) a conditional relationship 'if p then q' is asserted for an extreme, i.e. most unlikely or informative antecedent. The conventional implicature that concessive connectives contribute to the meaning of a sentence is very similar. A sentence of the general form (64)a. has a presupposition roughly describable as (64)b.:

(64) a. Although/even though p, q
b. If p then normally not q

What concessives and concessive conditionals differ in is the factuality of their clauses. Concessive sentences entail both their component clauses. Asserting a concessive sentence of type (64)a. amounts to asserting both p and q against the background assumption of a general incompatibility between the eventualities described by 'p' and 'q'.

Concessive conditionals like (54) or (57), by contrast, neither entail their antecedent nor their consequent (cf. Bennett, 1982). Under certain conditions, however, they may imply or signal the truth of their consequent. This is certainly true of the 'introduced *if* conditionals' discussed in Bennett (1982:410ff.), where *even* focuses on the whole antecedent and where the conditionality is itself the result of the operation of *even*. Imagine that the following example is used in a

situation where the speaker is looking at the raging waters of a river and the ruins of a bridge:

(65) a. Even if the bridge were standing, I would not cross,
b. I will not cross as it is.

The alternative under consideration in this case is the real world. The context proposition of (65)a. can thus be spelled out as (65)b. In cases like these, the consequent is certainly entailed by the *even if* conditional.

In addition to the case just discussed, there are many other conditions under which the *even if* conditionals may signal the truth of their consequent. A 'closed' antecedent (cf. (66)) and focusing of the whole antecedent (cf. (67))—so that the negative counterpart of that proposition is a relevant alternative—seem to be particularly favourable factors for such a situation:

(66) Even if he is a little slow, he is actually quite intelligent.
(67) I will go there even if Mary doesn't come.

If concessive conditionals like (66) or (67) are used in a context where the antecedent is explicitly given or assumed to be true due to general background knowledge, they become indistinguishable from genuine concessives:

(68) a. It was good to see you even if it was only for a short time.
b. It was the loneliness of the neighbourhood…that kept the house next to theirs empty (p)… The house stood two hundred yards from the Bartlebys' and Alicia liked looking out of the window now and then even if it was empty.[10] (q, even if p)

It is quite plausible to assume that such cases of a transition from a concessive conditional to a concessive meaning provided the starting for the development of concessive sentences. The factuality of the antecedent which was initially provided by the context gradually came to be associated with the connectives themselves, which developed into genuine concessive connectives (cf. König, 1985, for more detailed discussion).

4.3. SCALAR ADDITIVE PARTICLES AND EMPHATIC REFLEXIVES

As briefly indicated in the introduction and documented in more detail in Chapter 8, scalar additive particles are often identical in form to the so-called 'emphatic reflexives' or 'intensifies'. Examples of languages in which the same expression can be used in these two functions are German *(selbst),* Dutch *(zelfs),* Norwegian *(selv),* French *(même)* and Irish *(féin),* to give only a few examples.[11]

This cross-linguistic tendency for homophony suggests that there is a close connection, both synchronically and diachronically, between scalar additive particles and 'emphatic reflexives' and we will round off our analysis of scalar additive particles by taking a brief look at this relationship.

There are at least two different uses of emphatic reflexives that need to be distinguished: the 'head-bound' use as in (69) and the 'non-head-bound' or 'adverbial' use as in (70) (cf. Edmondson and Plank, 1978; Plank, 1979a). Interestingly enough, the distribution of these two uses of German *selbst* is, to a large extent, complementary to that of the use of that expression as focus particle:

(69) Der Präsident selbst hat es angeordnet.
'The President himself gave the order.'
(70) Der Präsident hat die Ausstellung selbst eröffnet.
'The President opened the exhibition himself.'
(71) Selbst der Präsident kam zu dem Vortrag.
'Even the President came to the lecture.'

As is shown by examples like (69) and (70), the positions in which emphatic reflexives occur in German are possible positions for focus particles: the position adjacent to a precedent 'focus' and the position in the middle field after a topicalised 'focus'. Note, furthermore, that *selbst* is stressed in both (69) and (70) just as some other particles *(allein, auch)* would be. Not only these distributional facts, however, but also the possibility of describing their interaction with the containing sentence in terms of the distinction between 'focus' and 'scope', suggests that 'emphatic reflexives' can be analysed as focus particles. So, let us further explore how far this hypothesis can be maintained.

There are at least two problems that seem to stand in the way of such an analysis. First, it is possible for a sentence to contain both an emphatic reflexive and a member of the core group of focus particles. Moreover, both of these expressions may be associated with the same focus:

(72) a. Sogar der Direktor versorgt seinen Garten selbst.
'Even the Director looks after his garden himself.'
b. Sogar das Unfallopfer selbst ist mit der Regelung zufrieden.
'Even the victim of the accident himself is content with the settlement.'
(73) a. Nur Vereinsmitglieder müssen ihr Essen selbst bezahlen.
'Only members of the club have to pay for the dinner themselves.'
b. Nur der Präsident selbst kann diese Entscheidung treffen.'
'Only the President himself can make this decision.'

Secondly, the contribution made by emphatic reflexives to the meaning of a sentence cannot simply be described in terms of existential presuppositions or restrictive entailments. Whenever sentences with emphatic reflexives do seem to

have restrictive entailments ('Nobody other than β α-ed') this is due to the meaning of the rest of the sentence, rather than to the emphatic marker itself. Given that only one person opens an exhibition, a sentence like (70) implies, of course, that nobody other than the President did.

Neither of the two arguments given, however, provides real evidence against the analysis of emphatic reflexives as focus particles. All the second argument amounts to is that such expressions are not straightforward instances of additive or exclusive particles. And that two focus particles are associated with the same focus, albeit with different scope, is a fairly common phenomenon, as is shown by combinations like *schon allein* in German. So, the two facts mentioned above are perfectly compatible with an analysis of emphatic reflexives as focus particles and there are, moreover, several facts that provide positive evidence for such an analysis.

First, as already pointed out above, the positions in which emphatic reflexives occur in German are possible positions for focus particles. True, there is a distributional gap, viz. the position in front of an adjacent focus, but this gap is filled by another use of the same expression, namely the scalar additive use of *selbst*. Secondly, there is the problem of accounting for the difference in syntactic structure and meaning between sentences like (69) and (70), bearing in mind that such pairs of sentences differ in a wide variety of languages just in the position of an otherwise identical expression. Since there are good reasons for saying that *selbst* is associated in both sentences with the same focus, it is very tempting to regard the difference in word order and meaning as a difference of scope. In fact, we will argue that *selbst* in (70) takes scope over the whole sentence, whereas the scope of the intensifier in (69) is restricted to the NP in the forefield, a situation which is also quite common for post-nominal *nur* and *allein*. Finally, the essential aspects of the meaning of *selbst* in (69) and (70) fit very well into the general framework developed above. So, let us now take a closer look at the meaning of the head-bound and non-head-bound intensifier *selbst*.

The analysis of emphatic reflexives given in Edmondson and Plank (1978) and Plank (1979a) is probably the most comprehensive and most adequate analysis given for these expressions so far and thus provides a useful starting-point for our discussion. According to Edmondson and Plank (1978:404), head-bound intensifiers associate 'a pragmatic scale with propositions that is graduated in terms of the speaker's expectation (remarkability) of the involvement of certain individuals in the actions, states or processes denoted by the schemata.' A sentence like (69) would thus presuppose (or conventionally implicate) that the President is lowest on the expectancy scale and suggests that the relevant order would have been more expected from others than from the President.

This analysis cannot be complete or fully adequate, however. The view that head-bound intensifiers induce an ordering is certainly correct, but the relevant scale cannot be one of expectancy as the following examples show:

(74) a. Wir haben die Information vom Regierungssprecher selbst.
'We got the information from the government spokesman himself.'
b. Richard Wagner selbst erschien plötzlich bei den Bayreuther Festspielen.
'Richard Wagner himself suddenly appeared at the Bayreuth Festival.'

In sentences like (74)a. the government spokesman is characterised as a particularly important, relevant and competent, rather than unexpected, source of information, just as Richard Wagner's appearance at the festival organised around his work is certainly not unexpected. The ranking introduced by *selbst* in (74)b. is more one of importance, prestige, glamour, etc. Another important addition concerns the syntactic role of a head-bound intensifier and the semantic effect of this role. As already indicated, such emphatic reflexives are best analysed as taking scope only within the NP to which they are attached, in other words their scope is co-extensive with their focus. Clear evidence for this assumption is provided by the fact that, in contrast to the adverbial use, head-bound reflexives are never affected by a negation:

(75) Der President selbst wird nicht an der Konferenz teilnehmen.
'The President himself will not take part in the conference.'

As a result of this relation to the rest of the sentence, head-bound intensifiers do not trigger the existential presuppositions characteristic of additive particles. The alternatives brought into the discussion by a head-bound intensifier are best characterised as entourage, surroundings or environment of the entity denoted by the focus expression: the subordinates of the President in sentences like (69), the family of the victim in (72) and further lethal devices in sentences like the following:

(76) (Die Leiche von Uwe Barschel zeigte keine Spuren von Gewaltanwendung.) Das Medikament selbst reichte aus, um den Tod herbeizuführen.
'(The body of Uwe Barschel showed no signs of violence.) The drug itself was sufficient to cause death.'

That head-bound *selbst* has this effect on the selection of alternatives to the value of the focused expression is clearest in those cases where the intensifier is in the scope of an exclusive focus particle like *nur* 'only'. The set of possible alternatives is much more restricted in the sentence with *selbst* than in the corresponding sentence without that expression:

(77) a. Nur der Präsident selbst fährt zu dem Treffen.

'Only the President himself will go to the meeting.'

b. Nur der Präsident fährt zu dem Treffen.
'Only the President will go to the meeting.'

So far we have almost exclusively looked at examples which are meant to be read with only one nuclear tone, invariably placed on the intensifier. If a second (or third, etc.) nuclear tone is associated with such structures, we get a double (multiple) focus construction.[12] The following sentence, as well as (75), are cases in point:

(78) Paul's Familie wohnt in London. Er selbst wohnt in Mümchen.
'Paul's family lives in London. He himself lives in Munich.'

It is particularly such double-focus constructions that make a further property of head-bound *selbst* clear. In sentence pairs like (78) or (79), the emphatic reflexive could not be combined with the subject of the clause expressing the contrast, whatever their linear sequence:

(79) a. (Der Unfall ereignete sich um 5 Uhr morgens.) Der Beifahrer wurde schwer verletzt, der Fahrer selbst war sofort tot.
'(The accident happened at at 5 a.m.) The front-seat passenger was severely injured, the driver himself was killed instantly.'

b. …? Der Fahrer wurde schwer verletzt, der Beifahrer selbst war sofort tot.

Head-bound *selbst* associates a centre with a periphery, entourage, environment, etc. of alternative values and characterises this centre as ranking high on some salient scale specified by the context. If an entity is identified by the relation it bears to the other entity to which it is opposed, this former entity can never be such a centre. In (78) people are identified in terms of their relationship to Paul, in (79) a person is identified in terms of his/her role with respect to the driver. It is therefore Paul and the driver who provide the 'centre'. And this leads to a final observation on the meaning of head-bound *selbst:* this intensifier identifies its focus as the most salient entity or 'centre' in the relevant context.

The non-head-bound (adverbial) use of emphatic reflexives presents the analyst with even bigger problems than the head-bound use, and although a number of interesting observations and suggestions have been made in some recent studies (cf. Edmondson and Plank, 1978; Plank, 1979; etc.), an adequate formal or informal analysis of this use has yet to be written. The following discussion summarises some relevant observations and suggestions with the aim of highlighting the relatedness between scalar additive particles and emphatic reflexives.

The assumption made above that non-head-bound intensifiers invariably select the subject of a clause as their focus is based on the fact that there is a kind of semantic agreement between the two. Intensifiers of this type can only relate to a human or at least animate subject and may furthermore manifest gender, person and number agreement:

(80) a. Der Hund (*Wind) öffnet die Tür selbst.
'The dog (wind) opens the door himself.'
b. The king fixed the car himself.
c. Ma mère le fera elle-même.
'My mother will do it herself.'

A further contrast between head-bound and non-head-bound intensifiers is that the latter take scope over a whole clause. The following examples show that non-head-bound intensifiers may take scope over a negation and also be in the scope of a negation. In German this contrast of relative scope is always marked by the linear sequence of the two operators:

(81) a. Der Lehrer weiβ die Antwort selbst nicht.
'The teacher does not know the answer himself.'
b. Der Direktor wäscht sein Auto nicht selbst.
'The Director does not wash his car himself.'

Examples like (80)b. and (81)b. give the impression that non-head-bound intensifiers might be analysable as exclusive focus particles. The contribution that *selbst* makes to the meaning of (80)b. and (81)b. can be paraphrased by 'nobody else did' and 'somebody else did', respectively. Tempting though this analysis might be for such examples, it is clearly wrong for examples like (81)a. or (82):

(82) a. Ich kann heute die Kinder nicht hüten. Ich gehe selbst aus.
'I cannot look after the children tonight. I am going out myself.'
b. I cannot lend you any money. I am a little short of cash myself.

Such examples clearly show that the assumption frequently made in the literature, that intensifiers can be glossed by 'nobody else' cannot be maintained. In fact, the emphatic reflexives can partly be paraphrased by *too/either,* as pointed out in Plank (1979a). Part of the conditions for using the intensifiers in (82)a.–b. is that there is somebody else going out and there is somebody else who is short of cash. So intensifiers look more like additive particles in (82) and this means that they belong neither to the exclusive nor to the additive group. Whether 'nobody else' or 'too/either' is more appropriate as a gloss is clearly a matter of the context. Sometimes only a change from a definite to an indefinite

article may result in a different effect of the intensifier on the meaning of a sentence:

(83) a. Fred gave the flowers to Mary himself.
b. Fred gave (some) flowers to Mary himself.

In Edmondson and Plank (1978:406f.) non-head-bound intensifiers are analysed as associating a scale of directness with a propositional schema and as ranking the subject term phrase highest on the scale of direct involvement. Thus, a sentence like (80)b. would have roughly the following analysis:

(84) a. Presupposition: x fixed the car.
b. Assertion: < the king, x_1, x_2, x_3…>
most directly involved more indirectly involved

In other words, a non-head-bound intensifier asserts that the subject term phrase is the most directly involved agent, experiencer, etc. in the event, process or state described by the relevant sentence. But as Plank notes in a subsequent paper (Plank, 1979a), this analysis focuses too much on those cases where the intensifier has a purely exclusive effect (‘nobody else does’) and neglects crucial aspects of the meaning and use of non-head-bound intensifiers. Let us therefore take a more detailed look at examples like (82), where the contribution of the intensifier to the meaning of the sentence is very similar to that made by *too/ either* in such contexts. What is crucially important for the use of the intensifiers in such cases are the contexts given in the preceding sentence. Similarly in (81) a., the relevant context is something like ‘The teacher asks a lot of questions (; but does not know the answer himself.’) And, as Plank notes, many apparently unacceptable sentences with non-head-bound intensifiers become fully acceptable, once such a context is supplied:

(85) a. ?Fred smells a little himself.
b. How can Fred complain about the odour of other people when he smells a little himself?

It is the requirement of this particular context which distinguishes intensifiers from additive particles like *too, either:*

(86) a. Fred doesn’t know the answer and I don’t know it either.
b. ?Fred doesn’t know the answer and I don’t know it myself.
c. The teacher asked me a very difficult question and/but he did not know the answer himself.

Additive particles like *too, either, also* can simply be used if the same predication applies to different terms, as in (86)a. If these additive particles make

a further contribution to the meaning of a sentence, then it is perhaps the implicature that the two propositions support the same conclusion (cf. Blakemore, 1987). A text like (86)b. is a little odd, unless we complement it with the assumption that the speaker is the one who asked the question or is particularly affected by it, etc. Exactly such a context is supplied in (86)c. by the first conjunct.

If the availability of such a specific context is a crucial condition for the use of intensifiers in cases where these expressions have an additive effect, what then is the counterpart of this condition in cases like (80) or (83)a., in examples, that is, where the intensifier has an exclusive effect? The exclusive effect itself is due to the fact that such examples describe activities carried out only once: if the King fixed the car, nobody else has to do it or is able to do it, etc. That such examples require specific contexts for their use is not so obvious, but there does seem to be a contextual condition for examples like (80) and (83)a. that is analogous to the one discussed for (85) and (86). Examples like (80)b. clearly suggest that the car in question is the King's car and that the King is ultimately interested in or responsible for fixing it. The revised analysis of non-head-bound intensifiers proposed in Plank (1979a) makes essential reference to these contextual conditions. The essential function of non-head-bound *selbst* is seen in an assertion of identity between arguments in different roles. The interested party in (80) is also the one most actively involved in carrying out the activity and the addressee of a request in (82) is also directly affected by the state that has led to the request, etc. Such an assertion of identity is also assumed to be an important ingredient in other uses of G. *selbst:* its use as a head-bound intensifier, and its use as a scalar additive particle.

This revised analysis certainly captures some relevant intuitions, even if is not at all clear how it is to be made precise and explicit. What remains to be done, is to integrate these revisions with those aspects of the analysis given in Edmondson and Plank (1978) which seem basically correct. What should be kept of this earlier analysis, I think, is the idea that non-head-bound intensifiers order the focus value and the alternatives under consideration in terms of directness of involvement. And in this ranking, the contextual conditions discussed above play an important role. In the exclusive cases like (80), (81)b. or (83)a. the subject term is ranked higher than a possible substitute or intermediary, because the relevant person is the interested or responsible party and also the agent. In the 'inclusive' cases like (81)a., (82) or (83)b., the value of the subject-NP ranks higher because s/he is the addressee of some request, the one asking questions or criticism and, at the same time, s/he is in the same state as a relevant alternative.

The preceding discussion of the meaning of emphatic reflexives (intensifiers), however sketchy and informal it may be, clearly shows that the use of the same expression both as scalar additive particle and as emphatic reflexive is no coincidence, but has a firm basis in closely related meanings. In both, or better 'all three', cases the meanings of the relevant expressions are best analysed in terms of the distinction 'focus' and 'scope', to which these expressions are clearly

sensitive. The claim made above that head-bound intensifiers take scope only over the term phrase which is also their focus is well supported by evidence given for the frequency of such local scope and identity of focus and scope in other chapters of this book. Scalar additive particles and non-head-bound intensifiers are more closely related in so far as they take scope over a whole clause. They differ, however, in that only the animate subject of a clause qualifies as a possible focus of the non-head-bound intensifier. In all three cases, the relevant expression induces an ordering: the scalar additive particle is associated with a scale of strength or informativeness, the head-bound intensifier distinguishes centre and periphery (entourage, environment) and 'directness of involvement' seems a good approximation towards a characterisation of the relevant dimension in the case of non-head-bound intensifiers. Moreover, an assertion of identity also seems an important ingredient of the meaning of all three groups of expressions: Plank's suggestions to this effect were summarised above and it will be shown in Chapter 6 that this aspect played an important role in the historical development of E. *even*.

However closely related scalar additive particles and the two kinds of intensifiers might ultimately turn out to be, the differences between them cannot simply be regarded as consequences of different scope assignments. Scalar additive particles and intensifiers are, after all, not in paradigmatic contrast, but may be combined. In keeping with the well-known stylistic principle *variatio delectat,* the double use of the same phonological form (e.g. *selbst* in German) is typically avoided in sentences with such combinations:

(87) Sogar (?selbst) der Präsident selbst wird an der Sitzung teilnehmen.
'Even the President himself will take part in the meeting.'

So, what we find in a wide variety of languages now is a genuine case of polysemy. A distinction has to be drawn between several, albeit very closely related, meanings. On the basis of what we know about the general properties of grammaticalisation, it seems quite plausible that scalar particles like G. *selbst* developed from emphatic reflexives rather than the other way round. The fact that head-bound intensifiers and scalar additive particles make a very similar contribution to sentences expressing sufficient conditions could have played an important role in such developments:

(88) a. Das Medikament selbst reichte aus, um den Tod herbeizuführen.
'The medication itself was enough to kill the person.'
b. Selbst das Medikament reichte aus, um den Tod herbeizuführen.
'Even the medication was enough to kill the person.'

4.4. PARTICULARISERS

The cover term for the particles to be briefly discussed in the following section has been borrowed from Quirk *et al.* (1985:604f.). The particles grouped together under this label in *A Comprehensive Grammar of the English Language* include *chiefly, especially, largely, mainly, mostly, notably, particularly, primarily, principally, specifically, at least* and *in particular.* Not all members of this list meet the syntactic criteria discussed in Chapter 1. *Especially, particularly, in particular* and *notably* combine with focused constituents of various types just like *even* and *only:*

(89) a. Especially the girls objected to his manners.
b. The workers, in particular, are dissatisfied with the government,
c. Only a fool refuses gifts, particularly when he deserves them,
d. Many members were absent, notably the vice-chairman.

The typical syntactic behaviour of the other elements listed above, however, is that of VP-adverbs rather than cross-categorial operators. Analogous problems of delimination arise in German. Again, there are clear cases of focus particles like *besonders, insbesondere, zumal, vor allem* and marginal cases like *hauptsächlich* and *in Sonderheit*.

In Quirk *et al.* (1985:604), particularisers are considered as a subgroup of 'restrictive subjuncts', because they 'restrict the application of the utterance predominantly to the part focused', the other subgroup being the exclusives (*only, merely,* etc.) to be discussed in the next chapter. This characterisation and classification, however, is not a very illuminating one. Particularisers clearly have existential presuppositions just like the other additive particles discussed in this chapter. A sentence like (89)b. clearly implicates that people other than the workers are dissatisfied with the government. Moreover, paricularisers are scalar particles, since they always induce an ordering for the focus value and the alternatives under consideration. The focus value is characterised as a clear case for the predication expressed by the rest of the sentence. The alternatives under consideration do not manifest the relevant property as clearly. The ordering associated with particularisers can thus roughly be expressed by a comparative statement (more p than p′) with the relevant sentence without particle (p) as one argument and an alternative proposition (p′) as the other. This assumption is well in line with the fact that particularisers can only occur in sentences which are compatible with some comparative ranking:

(90) a. Especially handicapped people have great difficulties in finding a job.
b. Kinder, zumal kleine, erfordern viel Betreuung.
'Children, small ones in particular, require a great deal of care.'
c. *This table, in particular, is made of wood.

Because of this 'comparative ranking' that is associated with particularisers, it is not surprising that in some of their uses they are indistinguishable from degree adverbs:

(91) a. Especially John is intelligent,
b. John is especially intelligent.

5
Exclusive particles

5.1.
EXCLUDING THE COMPLEMENT

Just as all languages can be assumed to have at least one 'inclusive' or 'additive' particle, like E. *also, too* or G. *auch,* it is also a fair guess that they will have at least one 'exclusive' particle like E. *only* or G. *nur*. The basic outlines of the meaning of *only* and its German counterpart *nur* have already been described (cf. Chapter 3). A sentence with *only* presupposes the relevant sentence without particle and entails that none of the alternatives under consideration satisfies the open sentence obtained by substituting a variable for the focus expression (cf. Horn, 1969; Taglicht, 1984; Rooth, 1985; Altmann, 1976; Jacobs, 1983). If the problem of adequately representing the context-dependence in the selection of alternatives is neglected, the contribution made by *only* to a sentence like (1)a. can be described as follows:

(1) a. Only JOHN came.
b. John came (presupposition)
c. $\neg(\exists x)[x \neq \text{John}) \ \& \ \text{came}(x)]$ (entailment)

In other words, *only* excludes the complement of the value(s) with respect to the set of values under consideration as values for the relevant open sentence and is thus negative in its truth conditions. The positive contribution made by the particle to the meaning of a sentence is a presupposition, which corresponds in simple cases like (1) to the relevant sentence without particle. This analysis is clearly preferable to a view occasionally also found in the literature, according to which a phrase of the form 'only α' abbreviates a conjunction 'α and only α' (cf. Horn, 1989:248):

(1) d. John (came) and only John came.

The test for presuppositions discussed above clearly identifies the first conjunct of (1)d. as having that status.

On the basis of well-known logical equivalences (DeMorgan's Laws, Laws of Quantifier Negation), (1)c. can be rephrased as (1)e., but this logical form does not adequately represent the essentially negative character of the truth conditions of most uses of *only:*

(1) e. $(\forall x)\,[\text{came}(x) \rightarrow (x = \text{John})]$

This negative character can often be captured, on the other hand, by paraphrases with unspecific negative quantifiers (*nobody, nothing,* etc.) and 'exception markers' like *except, other than, short of, save, but*:[1]

(2) Nobody but John came.

Given this equivalence, it is not surprising that complex expressions consisting of negative existential quantifier and exception marker function as exclusive particles in a variety of languages and that exclusive particles often derive from such constructions. *Ne…que, rien que* in French, *non…che* in Italian and *sika…* Neg. in Japanese are cases in point:

(3) a. He is (nothing) but a child.
b. (Fr.) Cela ne faisait que commencer.
'This was only beginning.'
c. (Ital.) Non ha comprato che un libro.
'He has only bought one book.'
d. Non ha comprato se non un libro. (cf. Manzotti, 1984: 51)
'He only bought a book.'

Like many other languages, English has a variety of exclusive particles. In addition to *only,* particles like *merely, solely, purely, alone, exclusively* and perhaps also *just* and *simply* can be assigned to this subclass. It will be shown below that, even apart from stylistic considerations, not all of these expressions can be regarded as synonyms and that the differences in their meaning can be described in terms of the parameters identified in Chapter 3.

5.1.1. Scalar and non-scalar uses

So far we have assumed that *only* does not induce an ordering for the values under consideration and thus does not restrict the domain of quantification to scales. This assumption seems to be justified for examples like (1)a., but it does not do justice to cases like the following:[2]

(4) a. I only bought THREE apples.
b. He saw him only BRIEFLY.
c. He is only a PLUMBER.

In cases such as these, the values under consideration can certainly be ordered on a scale. The alternatives excluded in (4)a. and (4)b. are higher numbers and longer spans of time, respectively, and (4)c. can be used to assert that the person in question has no higher social rank than that of a plumber.

All of the numerous analyses available for E. *only* and its counterparts in other languages agree that these particles may be associated with a ranking. Evidence for this assumption is not only provided by examples like (4) but also by the fact that both the non-scalar *also* and the scalar *even* may function as a dual counterpart of *only:*

(5) a. He bought not only apples, but also pears.
b. Is only a B grade required?—No, you even need an A grade.

The point where many analyses disagree is the question of whether we should assume polysemy (i.e. both a scalar and a non-scalar meaning), vagueness or a univocal *only* that is always associated with a scale and an evaluation. The view that *only* has two meanings, advocated, for instance, in Horn (1969) and Altmann (1976), is clearly the least plausible one, since it does not do justice to the role that the context plays in the selection of the domain of quantification for *only*. It is especially the lexical specification of the focus that leads to a scalar or a non-scalar reading of *only*. The analysis according to which *only* and its counterparts in other languages invariably induce an ordering and an evaluation, supported *inter alia* by Lerner and Zimmermann (1981), Foolen (1983) and van der Auwera (1984), has to make special provisos for examples like (1)a. and (6):

(6) Only the Prime Minister attended the meeting.

In cases such as these, the values under consideration are assumed to be sets, which are ranked according to their cardinality. Furthermore, it is assumed that the evaluative presupposition is cancelled in contexts like (6).

The third view according to which the meaning of *only* and its counterparts is indeterminate or vague with respect to the ordering parameter seems to be the most plausible one. This analysis, proposed *inter alia* in Jacobs (1983:171), seems best suited to account for the role of the context for the selection of the domain of quantification. And, in contrast to the two others, it is also compatible with the fact that both a scalar and a non-scalar reading can be found for many uses of *only*.

5.1.2
Evaluation

Given that the domain of quantification is a scale in at least some uses of *only,* we can now raise the question as to the division that *only* makes on this scale. On which side of the scale do we find the values excluded by *only* and what is the evaluation that is associated with this scalar use?

In cases like (4), the alternatives excluded are obviously the ones ranking higher on the relevant scales, as was pointed out above. As a consequence, the focus value is characterised as ranking low. Therefore, we can formulate the following evaluative presupposition for all scalar uses of *only:*

(7) a. only (λx(α), β)
b. Min_c (λx(α), β)

This analysis, according to which (i) higher values than the one given are excluded and (ii) the denotation of the focus is evaluated as minimal does not seem to be applicable, however, to examples like the following:

(8) a. Only a MIRACLE can save us (i.e. nothing short of a miracle).
b. Only a RADICAL change will save our economy.
c. Only $1,000 would solve all my problems (no smaller amount would do).
d. Only with $ 100 in his pocket would he go into this expensive restaurant.
e. Only if YOU WITHDRAW YOUR TROOPS, will they negotiate with you.

Examples like these seem to express the very opposite of the evaluation given in (7)b. and the alternatives excluded by *only* seem to rank lower than the value given in the focus. The problem is only an apparent one, however. According to the criteria formulated for scales in Chapter 3, the alternatives excluded in examples like (8) clearly rank higher than the focus value. Even if it is not fully convincing to assume that the relevant scales in examples like (8)a.–e. are determined by entailment relations in the normal sense of the word, it is certainly quite plausible that the a-sentence 'entails' the b-sentence in some models in each of the following pairs of examples and that the latter are thus instances of what has been called 'pragmatic entailments' of the former:

(9) a. Ordinary measures can save us.
b. A miracle can save us.
(10) a. A cosmetic operation can save our economy.
b. A radical change can save our economy.
(11) a. $500 would solve all my problems.

b. $1,000 would solve all my problems.

In examples like (8), the verbal context in the scope of *only* obviously reverses the scales found in examples like (4), which are also the scales that would be established out of context. In other words, the scales in (8) are not 'natural' or 'absolute' ones. But since the scale relevant for *only* is at least partly determined by the context in the scope of that particle, the analysis formulated for (1) and (4) also applies to (8).

Let us now try to characterise the contexts that bring about this scale reversal in more detail. The most obvious property of contexts like (8) is that they have a generic and conditional quality and thus contrast with factual contexts. If we change this generic or conditional character by changing the tense, for example, *only* is either interpreted differently or totally inappropriate. In (12)b., for instance, *only* has a 'temporal value', which requires the change from *if* to *when:*

(12) a. ?Nur ein Wunder rettete uns.
'Nothing but a miracle saved us.'
b. Only when you withdrew your troops did they negotiate with you.

We will therefore refer to such contexts as 'contexts expressing sufficient conditions'. Further properties of such contexts are revealed when they are contrasted with those to which they are systematically opposed, i.e. contexts expressing necessary conditions. In order to make the examples as parallel as possible we will consider examples like (13) rather than (8) and compare them to examples like (14):[3]

(13) a. (Only) x is required/necessary/needed/essential/must be done…
b. I need/want/require/demand/desire/expect…(only) x in order to…
(14) a. (Only) x is enough/sufficient/adequate/makes me happy /can be done…
b. I accept/appreciate/value/take/like/permit…(only) x.

Contexts expressing sufficient conditions like (13) or (8) are systematically opposed to those expressing necessary conditions like (14), in so far as a sentence of the former type with *only* can roughly be paraphrased by a sentence of the latter type without particle and vice versa:[4]

(15) a. Only a B grade is required≈A B grade is sufficient.
b. Only an A grade is adequate≈An A grade is required.

If we now examine the interaction between *only* and contexts of type (13) and (14), the following differences emerge: (i) The scales associated with necessary conditions are always 'natural' or 'absolute' ones. *Only* clearly excludes higher

grades in an example like (15)a. The relevant scales are determined by the entailment criterion mentioned above, since a sentence like (16)a. clearly entails (16)b.:

(16) a. $300 is required…
b. (At least) $200 is required…

(i) The scales associated with sufficient conditions, by contrast, are not always semantic ones and the order associated with necessary conditions or factual contexts is reversed. This difference is also revealed by the negative versions of the relevant contexts. Together with the value given, different sides of a scale are negated in the following two examples:

(17) a. A B grade is not adequate (and neither is a C grade).
b. A B grade is not necessary (and neither is an A grade).

(ii) Shifting *only* to a position behind its focus (together with a change in intonation) may lead to a change in the scope and thus in the interpretation of *only* in contexts expressing sufficient conditions, but not in contexts of type (14):

(18) a. Only $200 is enough to solve all my problems.
b. /$200 ónly/ is enóugh to solve all my problems/ (‡ (18)a.)

A parallel contrast is not possible in contexts expressing necessary conditions:

(19) a. Only $200 is required to solve all my problems.
b. $200 only is required to solve all my problems.

(iii) In contexts expressing necessary conditions, *only* can be replaced by *merely Just,* the slightly archaic *but,* and the adjective *mere* for that matter, without a change of meaning:

(20) a. Merely $200 is required to solve all my problems.
b. A mere $200 is required to solve all my problems.

Such a replacement invariably results in a change of meaning, i.e. in the narrow scope and purely evaluative reading equivalent to (18)b. in contexts expressing sufficient conditions:

(21) Merely $200 is enough to solve all my problems. (=(18)b.)

(iv) Contexts expressing sufficient conditions differ from those expressing necessary ones in that free-choice *any* is compatible with the former but not with the latter context:

(22) a. Any amount is adequate/sufficient.
b. ?Any amount is required/necessary.

So, in contrast with what is often claimed in the relevant literature (cf. Labov, 1972), restrictions on the possible contexts for free-choice *any* cannot be stated in terms of a feature [-fact] or as incompatibility with certain tense or aspectual forms (i.e. past tense, progressive). The crucial factor seems to be whether the sentence formulates some sufficient condition.

Moreover, superlatives and pseudo-superlatives can be used as universal quantifiers in contexts expressing sufficient conditions but not in contexts expressing necessary conditions. In other words, the former are instances of the contexts discussed by Fauconnier (1975a, 1975b).

(23) a. The slightest noise bothers my uncle.
b. A Rockefeller couldn't afford to buy this.
c. ? The slightest noise is necessary to bother my uncle.

(v) In contexts expressing sufficient conditions, additive and exclusive particles (e.g. E. *even* and *only;* G. *sogar, schon* and *nur, allein*) seem to be interchangeable, whereas they manifest the expected contrast in contexts expressing necessary conditions. This difference is easier to demonstrate for German, due to certain restrictions on the use of E. *even*.

(24) a. Nur der GEDANKE AN ARBEIT kann ihm den ganzen Tag verderben.
'Only the thought of work can spoil the day for him.'
b. Sogar/schon der GEDANKE AN ARBEIT kann ihm den ganzen Tag verderben.
'Even the thought of work can spoil the day for him.'

(25) a. Nur $200 sind nötig.
'Only $200 is required.'
b. Sogar $200 sind nötig.
'(As much as) $200 is required.'

In sentences of type (25) *nur* and *sogar* or *schon* differ in their interpretation in the expected manner: the amount mentioned in the focus of the particles is evaluated as small ('minimal') in (25)a. and as relatively large ('maximal') in (25)b. The two sentences in (24), by contrast, are equivalent on one reading of (24)a. This equivalence is, of course, not the result of a neutralisation of the normal opposition between additive and exclusive particles, but of different composition or projection. The relevant reading of (24)a. is the one where *nur* takes scope purely within the subject-NP and is thus equivalent to adjectives like *bloß* 'mere':

(26) Der bloβ Gedanke an Arbeit…(=(24)a.)
'The mere thought of work…'

What examples like (24) illustrate is that an evaluation as minimal within a phrasal scope is equivalent to an evaluation as maximal within a whole sentence expressing a sufficient condition.[5]

This equivalence is also the *raison d'être* of such particle combinations as G. *schon allein, auch nur* or D. *ook maar*. Given that additive and exclusive particles usually contrast, such combinations should lead to semantic incompatibilities and thus not be possible. It is, however, due to the equivalence between different evaluations in connection with different scope in contexts expressing sufficient conditions that such combinations may emphatically express the same meaning as a result of different composition. The following examples provide further illustration for this equivalence which has led to this strengthening in the form of two juxtaposed particles:

(27) a. Allein DIE ABSICHT genügt.
b. Schon DIE ABSICHT genügt.
c. Allein schon/schon allein DIE ABSICHT genügt.
'The intention alone is enough.'

(28) a. Even if you drink just a drop of alcohol, the boss will fire you.
b. If you drink even just a drop of alcohol, the boss will fire you. (cf. Bennett, 1982).

The preceding discussion has shown that the contrast between contexts expressing sufficient conditions and those expressing necessary conditions is a highly relevant one for the analysis of exclusive particles. The interaction of such contexts with exclusive particles shows that the former have a number of properties not shared by the latter or by other contexts for that matter. Contexts expressing sufficient conditions reverse the scales associated with other contexts and permit two options for the scope of exclusive particles, depending on their position and the intonation (i.e. tonality), which do not exist or are irrelevant in other contexts. As in the case of negative polarity ('downward-entailing') contexts, there does not seem to be any formal criterion for a definition or delimitation of such contexts. Again, semantic criteria seem to be the decisive ones.

We are now in a position to discuss some of the semantic differences that can be found within the group of exclusive particles in English and German. Contrary to what dictionaries suggest by using *only* as a gloss for nearly all other expressions, the following expressions are not synonyms:

(29) *Only, merely, purely, solely, but, exclusively, alone, just, simply*

The most obvious difference among the members of this group concerns the ordering parameter. The majority of the expressions in this list are compatible with both scalar and non-scalar contexts, with the exception of *exclusively* and *purely*. These two particles are not acceptable in any of the scalar contexts discussed above and are thus best analysed as operating over an unordered domain of quantification:

(30) a. This room is for women exclusively,
b. He did it purely for your benefit.

In German, *ausschließlich* is a clear instance of a non-scalar exclusive particle.[6]

In the list given above, *only* is clearly the most versatile element. In contrast to this particle, *merely, just, solely,* and *but* cannot take a context expressing a sufficient condition as scope. This was already hinted at in connection with (21) and is clearly shown by the following examples:

(31) a. Only (*merely) an EXCELLENT performance will please the boss,
b. You can only (*merely/*just/*purely) get a B grade for THAT ANSWER.
c. You can get a B grade merely/just/purely for THAT ANSWER.

As pointed out above, contexts expressing sufficient conditions reverse the scales associated with other contexts. Thus *excellent* denotes a low value on a scale determined by the context in (31)a., since it denotes a high value on a 'natural' scale. The evaluation associated with *merely* (i.e. 'minimal'), it seems, always relates to 'natural' or 'absolute' scales. This particle can only focus on an expression that denotes a relatively low value on such a natural scale. As a consequence this particle, as well as *just, purely, simply,* is only acceptable in a position where it can take phrasal (or 'narrow') scope, as in (31)c. In that sentence only the PP is in the scope of the particles, which characterise their focus value as 'minimal' on a natural scale. German *bloß* and French *rien que* exhibit the same constraint:[7]

(32) a. *Bloß EINE MILLION würde meine Probleme lösen
'Only one million would solve my problems.'
b. Rien que l'odeur qui émanait de ces livres-là lui rappelait toutes les petites maladies de la vie.
'Just the smell emanating from those books reminded him of all the little discomforts of his life.'

Just and *simply* are again somewhat different from the other elements listed in (29). We will discuss them in a later section. The contrast between *nur* and *erst* in German, which has an exact parallel in several other European languages, is also important enough to be discussed in a separate section.

5.1.3.
Problems of scope

On the basis of the preceding discussion we can now take a closer look at a few constructions in which *only* plays an important role and examine the contribution the particle makes to their meaning. The contrasts investigated here are primarily contrasts of scope.

Consider first the following contrasts:

(33) a. Only if p, q
b. If only p, (q)

If *only* precedes a conditional connective its focus is either a part of the antecedent or the whole antecedent and it takes the whole conditional as scope. In English, wide scope of *only* is not merely indicated by the position of the particle, but also by inversion of subject and auxiliary verb. Sentences of this type express necessary conditions:

(34) Only if you give me $10 am I prepared to mow the lawn.

Sentences of type (33)b., by contrast, are used as volitional or desiderative sentences in many languages:[8]

(35) If only I had followed your advice.

The view, expressed *inter alia* by Akatsuka (1986), that such sentences should be analysed as elliptical conditionals is a very plausible one. Whenever a sentence of type (33)b. is uttered, there is always an unexpressed consequent given in the context, so that the interlocutor can reject the connection claimed to hold between the antecedent given and the unexpressed consequent. This is the case in the following dialogue, where the father rejects the assumed connection on which the mother's retrospective wish is based (cf. Akatsuka, 1986:337):

(36) (At the funeral of a daughter who was killed in a car accident)
— Mother: If only I hadn't given her the car keys.
— Father: Don't blame yourself. (Even) if you hadn't given her the car keys the accident would still have happened.

On the basis of both syntactic and semantic facts it seems very plausible to assume that the whole antecedent is the focus of the particle in such cases. Syntactically, this analysis is plausible because the particle typically occurs between the conditional connective and the rest of the sentence:

(37) a. (E.) If only I could sleep.

b. (Fr.) Si seulement je pouvais dormir.

In German this order is only possible if the sentence does not contain any pronouns, which always precede the particle:

(38) a. Wenn nur bald etwas Regen käme.
'If only we had a little rain soon.'
b. Wenn er es ihm nur nicht gesagt hätte.
'If only he had not told him.'

Since the exclusive particle focuses on the whole antecedent and takes scope within that antecedent, focus and scope of the particle coincide. As a consequence there is no propositional schema for which alternative values could be excluded and the meaning of the particle is thus a purely evaluative one: the antecedent is evaluated as ranking low. The scale in question concerns the degree of difference between a situation in which the antecedent 'p' is true and the real world. So, what *only* does in sentences like (35)–(36) is to characterise the hypothetical situation or possible world in which the antecedent and a contextually given consequent would be true as minimally different from the real world. And it is this evaluative meaning which gives to such volitional sentences the overall meaning of modest wishes that could have been or could easily be realised.

The evaluation as minimal is also the essential ingredient that *only* contributes to the specific meaning of purpose clauses like the following:

(39) a. They drove off, only to return five minutes later.
b. Have you ever been involved in an argument with someone over an apparently factual matter, only to discover that some particularly crucial word in that argument had a different meaning for the other person?

In such sentences, the purpose clause is the focus of *only* and the whole sentence is in the scope of the particle. The sense of futility and frustration that such sentences convey is the result of the exclusive and evaluative implications of *only*. Alternatives to what turns out to have been the purpose are excluded and this 'purpose' is evaluated as ranking low on a scale of 'importance' or 'significance' for the event described in the main clause. As a result of the evaluation, this 'purpose' is characterised as absurd and the event denoted by the main clause as futile. In contrast to examples like (39), *only* takes scope merely within the purpose clause if it follows the relevant connective:

(40) He aimed carefully, in order to hit only the tree.

In a wide variety of languages there is a systematic difference between sentences in which exclusive particles precede a PP and sentences in which they occur inside such a phrase. Since the contrast is more systematic in German than in English, we will discuss it in connection with German rather than English examples.[9]

(41) a. Nur mit $100 in der Tasche geht er in dieses teure Restaurant.
'Only with $100 in his pocket would he go into this expensive restaurant.'
b. Mit nur $10 in der Tasche geht er in dieses teure Restaurant.
'With only $10 in his pocket, he is going into this expensive restaurant.'

(42) a. Nur bei 8°C mußten wir draußen arbeiten.
'Only if it was 8°C did we have to work outside.'
b. Bei nur 8°C mußten wir draußen arbeiten.
'We had to work outside and it was only 8°C.'

(43) a. Diese Geräte kaufte er nur für 10DM.
'He would only buy these for 10DM.
b. Diese Geräte kaufte er für nur 10DM.
'He bought these instruments for only 10DM.

While the b-examples simply express facts, the a-examples are clearly conditional in character and express necessary conditions. All examples are instances of a scalar use of *only,* since the numeral is the focus in each case. The scales associated with the a-examples differ, however, from those associated with the b-examples in each pair. The scales induced by the exclusive particle in the b-examples are 'natural' scales, i.e. the ranking is the one we would assign to the values under consideration out of context. In (41)b. and (43)b., the alternatives are higher sums of money and the value of the focus is characterised as minimal relative to these alternatives. In (42)b., plausible alternatives are higher temperatures. The alternatives under consideration in the a-examples are smaller amounts of money and lower temperatures, respectively. In other words, we find the scale reversal that is generally associated with contexts expressing necessary conditions.

These differences in meaning are the result of different scope assignments for the exclusive particles in the two examples of each pair. In the b-examples, *nur* is in construction with the numeral and takes scope within the PP. As a result of this phrasal scope, the meaning of the exclusive particle is a purely evaluative one and the scale in question is a 'natural' one. Moreover, restrictive particles can generally be paraphrased by restrictive adjectives in such cases:

(44) with a mere $10 in his pockets…(=(41)b.)

The ordering in the a-examples is determined by the sufficient conditions expressed by the relevant sentences without particle.

5.1.4.
Exclusive particles and adversative conjunctions

As noted in the introductory chapter, there is a close connection between exclusive particles like E. *only* and adversative conjunctions like E. *but*. In a considerable number of languages, the same expressions can be used in both functions. Examples are E. *but,* D. *maar,* Nahuatl *zan,* Modern Hebrew *ax, ela,* Cambodian *tae* and Thai *t*□□.

(45) a. (D.) Jan heeft maar TWEE honden.
'Jan has only got two dogs.'
b. In het centrum zijn de straten erg smal, maar hier zijn ze breed.
'In the centre the streets are very narrow, but here they are broad.'

Moreover, *only* and its counterparts in other languages are more or less interchangeable with adversative conjunctions, if the particles focus on the whole sentence and are thus used as 'conjunctional adverbs':

(46) I would like to come. Only I haven't got the time.

In order to account for this tie-up, we have to take a closer look at the meaning of adversative conjunctions. According to the analysis given for French *mais* by Ducrot (1980) and Anscombre and Ducrot (1977), arguably the best analysis given for adversative conjunctions in any one language, adversative conjunctions link two sentences with different argumentative orientations in a given context.[10] A sentence of the general form (47)a. is roughly analysed as follows:

(47) a. p but q
b. $p \rightarrow r$
c. $q \rightarrow \neg r$
d. q is a stronger argument for $\neg$ r than p is for r

The conflict or contrast between 'p' and 'q', often asserted to be an essential ingredient of *but* as opposed to *and,* may but need not concern the factual content of these two propositions. Typically, it relates to the use made of these two propositions in a given context as arguments for certain conclusions.

If the tie-up between exclusive particles and adversative conjunctions is examined in the light of the preceding analysis, it is clear that the complement-selecting operation provides the bridge for the use of expressions in both functions. Exclusive focus particles exclude the complement of the focus value with respect to the set of values under consideration as values for a prepositional

scheme and adversative conjunctions select the complement (i.e. ¬r) of the conclusion suggested by a preceding argument as conclusion of the clause they introduce.

5.2
TEMPORAL SCALES AND EXCLUSION

The lexical distinction between the two exclusive particles *nur* and *erst* is by no means an idiosyncratic property of German. There is a more or less parallel distinction in Finnish (*vain* vs. *vasta*), Polish (*tylko* vs. *dopiero*), Serbo-Croat (*samo* vs. *tek*) and some varieties of South American Spanish (*solamente* vs. *recién*). Most European languages (e.g. English, French, Russian), however, do not draw such a distinction. In the following section, I will analyse the meaning of *erst* in terms of the parameters distinguished in Chapter 3 and discuss the different uses of that particle that can be distinguished on the basis of an interaction of its meaning with that of different contexts.

5.2.1.
Basic properties

In contrast to *nur, erst* always induces an ordering. This is shown by minimal pairs like the following, already discussed in Chapter 3:

(48) a. Er fährt nur am Donnerstag nach München.
'He only goes to Munich on Thursday(s).'
b. Er fährt erst am Donnerstag nach München.
'He won't be going to Munich until Thursday.'

While *nur* in (48)a. may exclude all other days than the one mentioned, if they happen to be under consideration, *erst* in (48)b. can only exclude days preceding the one given. The latter sentence would therefore be the one that is used in a situation where the speaker wants to convey that he is not going on Monday, Tuesday and Wednesday. It is a consequence of this more restrictive meaning of *erst* that coordinations of the form *erst a und nur a* only make sense in that rather than the reverse order:

(49) a. Erst in der Renaissance und nur in dieser Zeit…
'Not until the Renaissance and only during this time…'
b. ?Nur in der Renaissance und erst in dieser Zeit…

The scales associated with *erst* are typically temporal ones. This is obvious and requires no comment for cases like (48)b. and (49)a., where the particle focuses on a temporal frame adverbial. The scale under consideration in examples of type (50) is associated with a temporal one in so far as the focus value and the

relevant alternatives are mapped onto different reference times. And the scales in examples like (51) are treated analogously to the temporal ones in (48)b.:

(50) Er hat erst DREI Äpfel gegessen.
'He has only eaten three apples so far.'
(51) Erst ein MERCEDES würde ihn zufriedenstellen.
'Nothing less than a Mercedes would satisfy him.'

Whenever *erst* combines with the conjunction *wenn,* which is open both to a conditional and a temporal interpretation, the result is invariably a temporal clause. The distinction is thus expressed by the particle in German and the conjunction in English in pairs like the following:

(52) a. Nur wenn p, q
b. Erst wenn p, q
(53) a. Only if p, q
b. Only when p, q (= not q until p)

Together with *nur, erst* belongs to the exclusive subclass of focus particles. Just like *nur, erst* implies that the alternatives under consideration do not make the relevant open sentence true: part of the contribution of *erst* to the meaning of (48) b. is that no day earlier than the one given—among the days under consideration —satisfies the open sentence 'He goes to Munich on x'. In (50), higher numbers than the one given are excluded and the alternatives excluded in (51) are cars of inferior quality. This analysis of *erst* as exclusive particle is also supported by comparative considerations. In those languages which have no counterpart for G. *erst,* one lexical element often corresponds to both *nur* and *erst* (e.g. Russian *tol'ko)* of an explicitly negative construction (e.g. E. *not…until;* D. *niet eerder dan;* Sp. *no ...hasta*) serves as a translational equivalent of *erst*. In English, the list of potential translational equivalents includes *only, not…until, not…for, nothing less than,* as the following examples show:

(54) a. Er heiratete erst als er vierzig war.
'He did not get married until he was forty.'
b. Die Ergebnisse werden erst in vier Tagen da sein.
'The results will not appear for four days.'
c. Erst nach dem Konzert erzählte er mir…
'Only after the concert did he tell me…'

If the focus of *erst* is specified in such a way that no alternatives are available for exclusion, the result is semantically deviant:

(55) a. ?Ich werde den Brief erst sofort/bald/umgehend beantworten.
'I won't answer the letter until immediately.'

b. ?Er hat erst ALLE Äpfel gegessen.
'He has only eaten ALL of the apples so far.'

Like all particles inducing an order, *erst* also expresses an evaluation. Given that *erst* and *nur* are closely related and indeed correspond to the same lexical item in many languages, we would expect that the evaluation expressed by *erst* is similar, if not identical, to that described above for E. *only* and G. *nur*. This assumption that *erst* evaluates the denotation of its focus as ranking relatively low works well for examples like (50) and (56).

(56) Es ist erst 8 Uhr.
'It is only 8 o'clock.'

It is certainly well in line with our intuition to assume that the number of apples eaten in (50) is evaluated as ranking low on a scale determined by the context and to assume that this evaluation as 'minimal' applied to a scale of time specification amounts to an evaluation as '(relatively) early' in (56). The values under consideration and excluded in the latter case are later times than the one given.

Unfortunately, this analysis does not work for cases like (51) or (54). The points in time excluded in (54) precede rather than follow the value given in the focus and the evaluation expressed by *erst* in this sentence is the opposite of that found in (56), i. e. the focus value is characterised as 'relatively late'. Similarly, the evaluation expressed by *erst* in (51) is more appropriately described as 'maximal' than as 'minimal'. The alternatives excluded in (51) are cars of lower value or prestige. So what we have here is clearly reminiscent of the scale reversals observed above in connection with *only*.[11]

5.2.2.
Use types

Apparently, we have to distinguish two different uses, or perhaps 'meanings' of *erst,* depending on the context in which the particle occurs. Let us now examine these contexts in more detail.

'Imperfective' use

In those cases where the alternatives excluded by *erst* rank higher or 'later' on a scale than the focus value and where the evaluation can be described as 'minimal' or 'early', the context in the scope of the particle typically denotes a state or process. Of the examples discussed so far, (50) and (56) belong to this use type, together with examples like the following:

(57) a. Das Glas ist erst halbvoll.
'The glass is only half-full (so far).'
b. Sie ist erst die dritte Schauspielerin, die diese Auszeichnung erhält.
'She is only the third actress to receive this award.'
c. Ich bin ihm erst zweimal begegnet.
'I have only met him twice so far.'

In examples of this type, a development is considered from the perspective of a given reference time which may but need not be identical to the moment of utterance. The sentence with *erst* describes the state reached in this development at this point of evaluation. We will follow Löbner (1989) in speaking of an 'imperfective' perspective or 'imperfective' use in such cases.[12] If *erst* is replaced by *nur* in these examples, which is possible in (50), (57)a. and (57)c., the sentence no longer describes a state as part of a development but merely a state.

The distinction between an 'imperfective' use of *erst* and the other use to be discussed presently, can also be justified on the basis of the paraphrases and translations that are possible. Only in its 'imperfective' use can *erst* (roughly) be paraphrased by *noch… nur* and this equivalence between *erst* and a combination of the aspectual adverb 'still/as yet' and the exclusive particle 'only' can also be observed in the following examples from English, French and Dutch:

(58) a. Ich habe deinen Aufsatz erst flüchtig gelesen.
b. Noch habe ich deinen Aufsatz nur flüchtig gelesen.
c. As yet I have only skimmed through your article.
(59) a. (Fr.) Elle n'est encore qu'une actrice de second plan.
'As yet she is only a second-rate actress.'
b. (D.) Hij is nog maar pas hier.
(he is still only hardly here)
'He has only just arrived.'

'Perfective' use

All examples with *erst* in which alternatives preceding the focus value are excluded and which express an evaluation as 'maximal' or 'relatively late' (i.e. (48)b., (49), (51), (54)) are instances of another use of this particle. The context in the scope of the particle in these cases typically denotes an event and the perspective inherent in these sentences is very different from the one of the examples discussed before. What is at issue in such sentences, provided they contain a reference to time, is to localise an event on a time axis by means of a temporal frame adverbial (cf. Löbner, 1989). If the rest of the sentence denotes a state rather than an event, the time adverbial identifies the beginning of the state:

(60) a. Ich kenne ihn erst seit gestern.

'I have only known him since yesterday.'

b. Die Gäste waren erst um Mitternacht betrunken.
'The guests were not drunk until midnight.'

The typical English translations of this use of *erst* are negative constructions: *not... until* if the frame adverbial denotes a point-in-time, *not...for* if it denotes a time span (cf. (54)b.) and *nothing less than* in the case of a non-temporal scale (cf. (51)). Under specific conditions, *only* is also a possible translation.

Having examined some properties of the two contexts in which *erst* is associated with contrary orders and evaluations, we can now discuss the question whether these differences are completely determined by the contexts in question. In analogy to the situation discussed above for *only,* we could assume that the two contexts determine different Horn scales. As demonstrated above, the implicational criterion discussed in Horn (1972), Fauconnier (1975a) and Jacobs (1983) determines different orderings in certain contexts in connection with *only*. And indeed there are some cases where different scales are determined by this principle in the two use types distinguished for sentences with *erst.* Consider, for instance, the scales relevant for (50). If someone has eaten 'n' apples, s/he has also eaten 'n-1' apples. Thus the scale in (50) is a natural one and the ordering can indeed be assumed to be determined by the context. The alternatives excluded are values higher than the one given and the focus value is characterised as ranking relatively low:

(50′) a. Er hat x Äpfel gegessen.
'He has eaten x apples.'
b. <…5, 4, 3…>

The context of *erst* in (51), by contrast, expresses a sufficient condition. On the basis of our findings in connection with *only,* it is therefore not surprising that the scale associated with this context of *erst* is not a natural one. As a result of the implicational criterion (if S(a)|=S(b), then b<a), the scale goes from cheaper to more expensive cars:

(51′) a. Ein x würde ihn zufriedenstellen.
'An x would satisfy him.'
b. <…VW, Audi, Mercedes…>

Unfortunately, however, the assumption that 'perfective' and 'imperfective' contexts determine different scales as domains of quantification for *erst* via the implicational principle only works for some types of examples. It does not work for those cases where the focus of *erst* denotes a point in time, such as the following:

(61) a. Es ist erst 8 Uhr.

'It is only 8 o'clock.'

b. Er beginnt erst um 8 Uhr.
'He won't start until 8 o'clock.'

In many cases, the relevant scales are disjunctive ones, i.e. the assertion of one value amounts to excluding all possible alternatives. If, for example, '8' identifies the beginning of an activity in (61)b. no other point in time can. The conclusion to be drawn from this is that if the two contexts distinguished above determine different orders in the domains of quantification for *erst,* they do not do so via the implicational principle formulated by Fauconnier, Horn and others.

Before we speculate any further about the contextual factors that are responsible for the different orders in the two use types distinguished above, we can reject an alternative analysis out of hand: the difference in the ordering associated with *erst* in the two contexts cannot be due to polysemy. The assumption that two 'meanings' have to be distinguished for *erst* is highly implausible for the following reasons. First, these two 'meanings' are very similar. *Erst* has the basic properties discussed in 5.2.1. in both of the uses distinguished above. The difference only concerns the ordering and, as a consequence, also the evaluation. Furthermore, the two alleged meanings are in complementary distribution.[13] Thirdly, *schon* stands in a dual relationship to *erst* on both of the uses distinguished above. In other words, *schon* may also select values on either side of the focus value and express contrary evaluations depending on the context in its scope:

(62) a. Es ist schon 8 Uhr.
'It is 8 o'clock (already).'

b. Er beginnt schon um 8 Uhr.
'He will start as early as 8 o'clock.'

(63) a. Er hat schon fünf Äpfel gegessen. (maximal)
'He has eaten as many as five apples.'

b. Schon der Versuch ist strafbar. (minimal)
'The mere attempt is an offence.'

And finally, languages which have a lexical distinction parallel to that between G. *nur* and *erst* exhibit exactly the same difference in the use of their counterpart of *erst* in the two types of contexts distinguished above. The following two Finnish sentences exemplify an 'imperfective' and a 'perfective' use of *vasta,* respectively:

(64) a. Kello on vasta kymmenen.
(the clock is only 10)
'It is only 10 o'clock.'

b. Esitys alkaa vasta tunnin kuluttua.

(the presentation begins only hour+Gen. after)
'The presentation won't start for another hour.'

Similar observations could be made for *dopiero* in Polish or *tek* in Serbo-Croat.

In summary, there is overwhelming evidence for the view that the differences in the contribution made by *erst* to the meaning of a sentence are not due to polysemy of the particle, but the result of two different perspectives imposed by two different context types on the scales associated with *erst*. How these differences are to be described in precise terms, however, is still an open question. So far there is no formal analysis available for *erst* and its counterparts in other languages that assigns only one meaning to these particles and derives the differences observable in the two context types from an interaction of that meaning with these contexts. The only formal analysis for *erst* that holds any promise (cf. Löbner, 1989) sees the common denominator of the 'imperfective' and the 'perfective' use not in a common meaning but in the same format of phase quantification in which these two uses have to be described.[14]

5.2.3. 'Retrospective' use

In addition to the two uses of *erst* distinguished so far, there is a third one, which although it is based on the perfective use of this particle, has to be regarded as a distinct reading. This 'retrospective' use, as we will call it, only occurs in combination with a temporal focus. Although it is based on the perfective use, it often lacks the negative implications of the latter. And if these negative implications are missing, the evaluative component of the particles becomes the central feature of its meaning: 'retrospective' *erst* evaluates the interval between a point in time specified by a time adverbial and a contextually given point of reference—usually the moment of utterance—as relatively short:

(65) a. (Ich kenne die Situation in Polen.) Ich war erst vor zwei Wochen dort.
'(I know the situation in Poland.) I was there only two weeks ago.'
b. Du hast doch erst vor kurzem Geld bekommen.
'But, you only just got some money.'

If 'retrospective' *erst* precedes a preposition like *in, vor* or *seit,* it can be replaced by a *nur* which takes scope within the PP and thus follows the preposition:

(66) Vor nur zwei Wochen war ich dort. (=(65)a.)

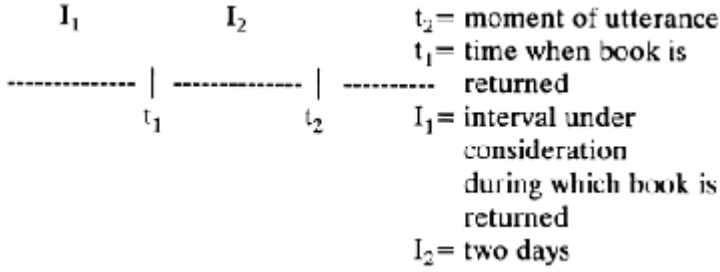
Even though the properties just mentioned justify distinguishing the 'retrospective' use from the 'perfective' one, this does not mean that these two

uses are unrelated. Consider the following example, which illustrates both the 'perfective' and the 'retrospective' use of *erst:*

(67) Paul gab das Buch erst vor zwei Tagen zurück.
'Paul only returned the book two days ago.'

This sentence asserts that Paul did not return a certain book during an interval and up to a point specified by *two days ago*. Recall that *erst* excludes alternative values to that of the focus which are under consideration in a certain context as candidates for the contrary course of events. The alternatives excluded in perfective contexts are points-in-time preceding the value given. This means that the point specified in the sentence ('two days before the moment of utterance') is evaluated as relatively late. This situation can be illustrated by the following diagram (cf. König, 1979a):

(67)



As a consequence of the evaluation of t_1 as relatively late, this point is also evaluated as being relatively close to the moment of utterance. The 'retrospective use' of *erst* may thus be an accompanying feature of the 'perfective use', given a temporal focus and a point of reference. In other words, there is a complementary relationship between 'perfective' and 'retrospective' use. It is the specific role of the moment of utterance or some other point of reference that gives rise to this 'retrospective' use. In contrast to other scales, temporal scales can be considered from a point of orientation, in addition to some value given by some time adverbial.

As is shown by our first example (65), however, the retrospective use of *only* is not always a concomitant feature of the negative use. The evaluation which usually is a concomitant feature of the restrictive meaning seems to have become an independent feature and in fact the only semantic feature of some uses of *erst*. Two complementary ways of looking at a scale have brought about two distinct uses. In German, these two uses cannot be distinguished formally, but only through the presence or absence of a negative implication. It is therefore the context which makes us decide on a certain interpretation. Consider the following example and its two possible interpretations and translations into English:

(69) a. Sie hat ihren Führerschein erst vor einer Woche bekommen.
b. She got her driving licence only a week ago.
c. She did not get her driving licence until a week ago.

The second translation is based on a 'perfective' interpretation of *erst,* which suggests that the person in question failed the test at least once. The first English sentence translates the other, purely evaluative translation of *erst*.

In English we have three possible translations for retrospective *erst —as recently as, only, and just:*

(70) As recently as/only/just two days ago, I paid another visit to my customers.

The first of these expressions *(as recently as)* can only be used in this retrospective function and *just* is predominantly used in this function in temporal contexts. *Only* can be used for both negative and retrospective *erst*. In initial position, these two uses of *only* can be distinguished by word order. A retrospective use of *only* does not trigger subject-aux. inversion, unless it is a concomitant feature of a negative use:

(71) a. Only recently has semantics been given the degree of attention previously paid to syntax and phonology.
('perfective' and 'retrospective')
b. Only recently he was telling Italian audiences that A. Fanfani…was the man to lead them out of the crisis.
(*New Statesman,* 19 May 1978, p. 662) ('retrospective')

Note that a purely 'retrospective' interpretation of *only* is not compatible with any verb which involves a change of state as part of its meaning. This is clearly demonstrated by examples like the following:

(72) a. *Only yesterday he arrived/left/came/realised…
b. Only yesterday he complained/sighed/mentioned…

Does this mean that we have to distinguish two different meanings of *only* in temporal contexts, contrary to what was said in 5.1.? I think not. The contrast exemplified by (71)a. and (71)b. can be analysed as being purely a matter of scope. It is generally assumed that a lack of inversion after a sentence-initial *only* is a clear indication that the particle has narrow scope, provided the focus is a constituent other than the subject (cf. Klima, 1964; Liberman, 1974). There is no reason not to extend this assumption to cases like (71)b. and (72)b. Since *only* has phrasal scope in such sentences and since there is thus no open sentence for which alternative values could be excluded, the meaning of the particle is a

purely evaluative one. What is evaluated in such cases is the distance between the point-in-time at which the relevant event occurs and a point of reference. Note that such a retrospective evaluation as 'minimal' is only possible if the time of the event is identified in terms of a point of reference. This is exactly why the deictic adverbials in (73)a.–b. make sense, whereas (73)c. is odd:

(73) a. Only last Wednesday, I was talking to John.
b. Only two days ago, I was talking to John.
c. ?Only on Wednesday, I was talking to John.

In German, the situation is different. 'Perfective' and 'retrospective' use are not based on different scope assignments for *erst*. The latter is clearly based on the former and is a concomitant feature of it.[15] But since the 'retrospective evaluation' can be the only feature of meaning expressed by *erst,* we have to recognise it as a distinct meaning.

5.3. EXCLUSION BY METALINGUISTIC MEANS

Modern English *just* derives from the Latin adjective *iustus* 'righteous, honourable, fitting'. Even though *just* can still be used as an adjective in the original sense, it has developed a variety of other uses which require a different syntactic categorisation and whose connection with the original meaning is no longer apparent. The usual classification of these uses as adverbs is not very illuminating and I will therefore follow Quirk *et al.* (1985:567ff.) in assigning *just* to the class of focus particles. *Just* clearly satisfies at least some of the syntactic criteria identified in Chapter 2 as essential for focus particles. This expression clearly interacts with the organisation of a sentence into a focused and a backgrounded part and its position in a sentence depends on that of its focus. I will also follow Quirk *et al.* (1985) in assigning *just* to the subclass of exclusives among the focus particles, but I will also show below that *just* is highly versatile and context-dependent in its interpretation and that the common denominator of all uses of that expression as focus particle is probably to be seen in its metalinguistic quality, derived from the original meaning of that expression.

A first cursory look at the distribution and meaning of non-adjectival *just* gives the impression that there is a large number of different meanings. In fact, G.Cohen (1969) argued that there are as many as six:

(74) a. 'precisely'—That's just what I wanted/Just why do you want it?
b. 'only'—I just want two apples.
c. 'simply/emphasis'—That's just marvellous.

d. 'barely'—He just made it by the skin of his teeth.
e. 'but'—Say what you want. Just don't mention my name.
f. 'immediately preceding'[16]—He just got here.

The differentiation between these uses or 'meanings' of *just* is based on the different paraphrases that are possible in various contexts. But what these paraphrases really show is that the relevant expressions do not have the same meaning and can only replace *just* in certain contexts. The claim that *just* has a large number of different meanings is a dubious one. First, there is a clear similarity between some of the 'meanings' distinguished above. This will be demonstrated in some detail below. Furthermore, at least some of the alleged different 'meanings' distinguished in (74) only occur in specific contexts and are thus in complementary distribution. The essential properties of the contexts that co-occur with a certain interpretation and thus allow a specific paraphrase can roughly be described as follows.

(i) *Just* can be paraphrased by *exactly or precisely* whenever a time, a location, a measurement, a property, etc. of some entity is identified by relating it to the time, location, measurement, etc. of something given in the context of utterance. The following sentences are examples of such identifying contexts:

'precisely, exactly' (identifying contexts):

(75) a. Fred is just as tall as Bill.
b. Fred is just the same height as Bill.
c. This is just what the doctor ordered.
d. He acted just as I thought he would.
e. The office is just across the street.
f. It happened just as the car backed out.
g. This is just the opposite of what I said.

One of the essential conditions for this use, as P.Bourdin (1982:22) has pointed out, is that the time, place or measurement given, i.e. the second term of the relation expressed in such sentences, must provide a clear identification. The identifications given in the b-examples of the following sentences (taken from Bourdin) are too vague and therefore exclude the use of *just* under discussion:

(76) a. That's just the point.
b. That's just a point.
(77) a. Tim lives just in the middle of Manchester.
b. Tim lives just in Manchester.
(78) a. Jenny is just sitting beside the river.

b. Jenny is just sitting near the river.

(ii) In order for *just* to be interpretable in the sense of 'only' or 'merely', it is necessary that the value denoted by the context can be identified as a medium or low value on some scale. In other words, such an interpretation is only possible whenever higher values are available for exclusion:

(79) a. He is just mediocre/average/ normal…
b. I just want three apples.
c. I was just wondering…
d. I did it just as a favour to you.
e. He evidently thought that his visit was just beginning.
f. Just recently/two days ago…

(iii) The context-dependence in the interpretation of *just* is particularly apparent if we compare contexts with a 'merely' reading to those where *just* has an emphatic effect and can be paraphrased by *simply*. The latter interpretation is only possible if the focus of *just* denotes an extreme value on some scale. The possible contexts for this interpretation include the appropriate adjectives and verbs as well as overt and covert negatives:

'simply'—(contexts denoting extreme values on a scale):

(80)
a. He is just wonderful/brilliant/awful/terrible…
b. I just love/adore/detest/abhor it.
c. I just ignored/hit him.
d. This is just too bad/not good enough.
e. He is just not an open person.
f. I just knew it.

(iv) From what has been said so far follows that the 'barely' reading of *just* is not available in any of the contexts considered so far. Pairs of sentences like the following are not equivalent, since the preferred interpretation of *just* is 'only' or a temporal one:

(81) a. He just touched his food.
b. He barely touched his food.
(82) a. I just talked to her.
b. I barely talked to her.

An interpretation of *just* as 'barely' requires a context that specifies a boundary or target, so that it is possible to determine whether something is in immediate juxtaposition of that target or well away from it. The 'barely' reading of *just* implies that a given target has been reached or a given boundary has been crossed.[17] But, if things had just been a little different, this would not have been the case.

'barely'—(contexts specifying a boundary or target):

(83) a. The ball is just out/wide/in…
b. We just missed the train/made it/passed the exam…
c. Just in time/just under 6 foot/just enough to…
d. Just across the border/just before lunch…
e. He just avoided colliding with the bus.
f. He just managed to finish his work in time.

Cohen's fifth use of *just* ('but') is so obviously related to the second ('only') that nothing further needs to be said about it. In (74)e. *just* can be assumed to focus on the whole sentence and therefore corresponds exactly to that use of *only* normally described as 'adversative'.

The preceding discussion has shown that the different 'meanings' distinguished by Cohen (1969) for the focus particle *just* are—at least to a large extent—in complementary distribution. Whether *just* is interpreted in the sense of 'merely', 'precisely' or 'barely' is determined by the context in which the particle occurs. Genuine cases of ambiguity are primarily due to the fact that *just* can be interpreted both as a focus particle and a temporal adverb in certain contexts. This versatility and context-dependence in its interpretation makes *just* highly unsuitable for the purpose for which it is used very often, viz. to serve as a gloss for the meaning of adverbs and particles in descriptive grammars of other languages.

Now, if the different meanings distinguished by Cohen are really different manifestations of a single general meaning, augmented differently in different contexts, how is this univocal *just* to be described? The best way of capturing this basic general meaning, I think, is to analyse *just* as a restrictive and exclusive particle that is invariably associated with a scale. The ordering principle on this scale is a metalinguistic one: the values under consideration are ordered along a dimension of appropriateness of formulation. The value of the focus of *just,* or of the related particle *simply* for that matter, is the most appropriate, straightforward and simple description of the relevant state of affairs.[18]

6
Identical values in conflicting roles

6.1.
EMPHATIC ASSERTION OF IDENTITY

The particles to be discussed in this chapter do not fit into either of the two subclasses discussed so far. Focus particles like *ausgerechnet, eben, genau, gerade,* in German, *exactly, precisely* in English, *net, juist* in Dutch, *juuri* in Finnish, *netop* in Danish, *bas* in Serbo-Croat, or *akkurat* in Norwegian require a somewhat different analysis from the ones given in the two preceding chapters. Since German has a more elaborate system of lexical distinctions in the relevant domain than English, we will make German the starting-point of our comparative discussion.

The use of *ausgerechnet, eben, gerade* and *genau* as adverbs derives from the more basic use of these expressions as adjectives (*eben* 'level', *gerade* 'straight', *genau* 'exact') and as past participle of *ausrechnen* 'calculate'. Among the uses normally categorised as adverbial, a few uses other than the ones as manner adverbial and focus particle can be distinguished. *Eben* and *gerade,* to take the most versatile of these expressions, can also be used as temporal adverbs to identify a point-in-time immediately preceding the moment of utterance or some other point of reference specified by the tense or a time adverbial, as modal particle (cf. (2)), and as 'downtoner' in the sense of 'barely' (cf. (3)):

(1) Er ist eben angekommen.
'He has just arrived.'

(2) Das ist eben so.
'That's (just) the way it is.'

(3) Mein Geld reicht gerade (so)/eben aus.
'My money is just/barely sufficient.'

These uses of *eben* and *gerade* will only play a role in so far as they specify a criterion of adequacy for any analysis of the focusing use of these expressions. Any

such analysis must account for the relatedness in these different uses of the same expressions.

On the basis of the syntactic criteria formulated in Chapter 2, the following examples are clear instances of a use of *ausgerechnet, eben* and *gerade* as focus particle. The position in the forefield together with the focused constituent identifies most clearly the class of focus particles in German:

(4) a. Ausgerechnet nach Hamburg möchte er fahren.
'He wants to go to Hamburg of all places.'
b. Eben/genau deshalb möchte ich nicht dorthin gehen.
'This is exactly why I don't want to go there.'
c. Wann genau kommt er?
'When exactly will he arrive?'
d. Gerade teure Autos verlieren rasch an Wert.
'It is precisely expensive cars that lose their value quickly.'

The fact that *ausgerechnet, gerade, genau* and *eben* are discussed together is not meant to suggest that these particles are inter-changeable in all contexts and have, by and large, the same meaning. They can be assumed to share certain features of meaning, however, since they are interchangeable in certain contexts (cf. (5)). And it is precisely these features shared by all four expressions as well as their counterparts in other languages that we are most interested in:

(5) a. Warum will er ausgerechnet/gerade morgen abreisen?
'Why does he want to leave tomorrow of all days?'
b. Genau/eben/gerade dies will ich nicht.
'This is exactly what I don't want.'
c. Von dem gerade/eben reden wir. (cf. Altmann, 1978:54)
'This is precisely what we are talking about.'
d. Du benimmst dich gerade/genau so, als hätte ich dich beleidigt.
'You are behaving exactly as if I had insulted you.'

It is tempting to see this common feature of meaning in a function of restriction and exclusion. *Genau* in German or E. *exactly,* for instance, could simply be analysed as exclusive particles that operate over scales and exclude values on both sides of the one identified by the focus expression. An analysis along these lines is proposed for E. *exactly* by Wierzbicka (1986a: 612), who proposes the following paraphrase for an expression of the form *exactly X:*

(6) EXACTLY

it is X
it is not a little more than X, it is not a little less than X

I don't want people to think that I say something a little different from what is true.

In Quirk *et al.* (1985:604), *exactly* and *precisely* are also counted among the exclusive particles and in Chapter 5 such an analysis is proposed for E. *just,* an expression that may be used as a translation for many uses of the German particles under discussion.

An analysis of this kind, however, is not adequate for *gerade* and *eben*. The former looks like a restrictive particle in contexts where no alternatives are available (cf. (7)) and is often used in the sense of E. *exactly* (cf. (8)), but may also carry the existential presuppositions typical of additive particles like *auch* 'also' and *besonders* 'especially' in contexts like (4)d.:

(7) Warum sich gerade HEUTE sein Wunsch erfüllen mußte, wußte er nicht.
'Why it was today of all days that his wish came true, he did not know.'

(8) a. Brilliant war er nicht gerade, aber er bemühte sich sehr.
'Brilliant he was not exactly, but he tried very hard.'
b. Der kommt mir gerade recht.
'He is just the person I was looking for.'
c. (Bavarian) Grad sauber iss.
'This is just great.'

I will therefore argue that the basic function of the particles under discussion is not to be seen in an 'exclusive' meaning, analogous to that of *only,* but in an emphatic assertion of identity. *Eben, gerade, ausgerechnet* and perhaps also *genau* are primarily used emphatically to assert the identity of one argument in a proposition with an argument in a different, contextually given proposition. Such an identification may be achieved via exclusion. This is probably the right analysis for G. *genau* and E. *exactly, precisely and just*. Identification of two values in different roles may also be directly expressed, however, i.e. in the way it is expressed by cleft sentences.

If the basic meaning of *eben, gerade, ausgerechnet and genau* is seen in such an emphatic assertion of identity, a number of distributional properties of these particles are easy to explain. *Gerade* typically occurs in complex sentences, in sentences with relative clauses, for instance, whose antecedent is the focus of the particle:

(9) Damit hat man Mißtrauen gerade zu einer Zeit erzeugt, wo wir so etwas am wenigsten brauchen können.

'This has created distrust at just the time we need it least.'

Such complex sentences clearly identify the two propositions in which the value of the expression focused on by *gerade* plays a role as argument and therefore provide the right environment for the particle. Simplex sentences with *gerade,* on the other hand, frequently give the impression of being incomplete and of requiring some complementary context. Compare, for instance, the following two nearly equivalent sentences, where both *gerade* and *besonders* 'in particular' carry the existential presupposition 'qualities other than punctuality are valued highly by the boss':

(10) a. Gerade auf Pünktlichkeit legt der Chef großen Wert.
b. Besonders auf Pünktlichkeit legt der Chef großen Wert.
'Punctuality, in particular, is valued highly by the boss.'

In contrast to the version with *besonders,* (10)a. is clearly elliptical and requires a preceding context in order to be appropriate. A very plausible context would be one where the person to whom the utterance (10)a. is addressed has said that s/he has difficulties with punctuality. Examples like (10)a. often look totally unacceptable unless such a context is provided. The following sentence, for instance, looks peculiar by itself, but makes perfect sense in the context given in (11)b.:

(11) a. Gerade/eben dieser Völler hat den Ausgleichstreffer geschossen.
'It was Völler who scored the equaliser.'
b. Völler war vier Monate verletzt, und gerade/eben dieser Völler hat den Ausgleichstreffer geschossen.
'Völler was injured for four months and it was precisely this Völler who scored the equaliser.'

Another distributional peculiarity of the expressions under discussion is pointed out in Altmann (1978:75): in its use as focus particle, *eben* is almost entirely restricted to demonstrative pronouns and anaphoric expressions as potential foci. In view of what was said about the basic function of *eben,* this distributional peculiarity makes sense. Demonstrative and anaphoric elements express referential identity of two expressions and *eben* emphasises this identity. A further piece of evidence for an analysis of *eben* and *gerade* in terms of 'emphatic assertion of identity' is provided by the fact that a sentence with a temporal clause introduced by *als* 'when' cannot describe a sequential or a causal relationship if this temporal clause is the focus of *gerade:*

(12) a. Als ich kam, ging Paul.
'When I arrived, Paul left.'
b. Gerade als ich kam, ging Paul.
'When I arrived, Paul was leaving.'

It has already been mentioned that the basic function of the focus particle under analysis seems to be somewhat similar to that of cleft sentences. In both cases it is a question of identifying certain arguments. What cleft sentences do is to identify the missing argument in a single proposition. What focus particles like *eben, gerade, ausgerechnet* do is to assert the identity of two arguments that play different roles in different propositions.[1] In order to account for certain properties of cleft sentences that have intrigued and puzzled many analysts before them, Atlas and Levinson (1981) have proposed the following logical form for a sentence like (13)a.:

(13) a. It was John that Mary kissed.
b. λ x(x=John) (τx(kiss (Mary, x))

The operator 'τ' in this representation is the collection operator, that combines with an open sentence to form a term phrase and is defined as follows:

(14) $B(\tau x A(x)) \equiv (\exists x)A(x) \,\&\, (\forall y)[A(x) \rightarrow B(x)]$

Atlas and Levinson (1981:52) have shown that this analysis explains the following properties of a sentence like (13)a. and its negative counterpart:

(15) It was John that Mary kissed.
a. entails *Mary kissed John*
b. entails *Mary kissed someone*
c. entails but does not 'presuppose' *Mary kissed (exactly) one person*
d. is about what/whom Mary kissed
(16) It wasn't John that Mary kissed.
a. entails *Mary didn't kiss John*
b. presupposes or its use implicates that Mary kissed someone
c. does not presuppose *Mary kissed (exactly) one person*
d. is about what/whom Mary kissed

The semantic analysis I want to propose for sentences with particles like *eben, gerade,* etc. is based on this analysis of cleft sentences. Again, only the basic outlines of such an analysis will be given in a representative example. The emphatic assertion of identity expressed by *gerade* in a sentence like (17)a. can be explicated by a logical form like(17)b.:

(17) a. Paul unterstützt gerade die Leute, die ihn hassen.
'Paul supports the very people who hate him.'
b. (λxλy(x=y) (τy hass- (y, Paul))) (τx unterstütz-(Fritz, x))

The analysis given for the focusing use of *eben* and *gerade* so far can profitably be extended to other adverbial and non-adverbial uses of these expressions. *Eben* expresses identity in a wide variety of compounds. Examples are *Ebenbild* 'exact image', *ebenfalls, ebenso* 'equally, also', *ebenbürtig* 'of equal rank or quality'. The temporal adverbs *eben* and *gerade* can also be analysed as implying identity as applied to time. The most comprehensive dictionary of Modern German (Klappenbach and Steinitz, 1967–77) gives 'simultaneity' as first entry for both *gerade* and *eben*. The two terms in this relationship of temporal identity are provided by the state or process denoted by the sentence containing one of these adverbs and a time of reference, either the moment of utterance or the time identified by some event:

(18) a. Fritz schreibt gerade einen Brief.'
'Fred is just writing a letter.'
b. Fritz zieht sich eben um.
'Fred is just changing.'
c. Ich wollte gerade weggehen, da kam Paul.
'I was just leaving, when (suddenly) Paul arrived.'

As a result of a natural semantic change, observable in many languages, adverbs originally referring to the moment of utterance often shift their reference to a time immediately preceding or following that point in time (cf. Canart, 1979; 5ff.). Unlike E. *soon, presently* or Fr. *bientôt* and G. *gleich,* however, which have all been shifted forward in their temporal reference, *gerade* and *eben* have extended their reference to the immediate past. In combination with the past tense or the perfect, *eben* and *gerade* relate to a time immediately before the moment of utterance:

(19) Paul ist eben/gerade weggegangen.
'Paul has just left.'

This analysis of *eben,* to give one more example, can also be extended to the use of this expression as answer particle (cf. (20)) and in appositions (cf. (21)):

(20) Er kommt uns morgen besuchen.—Eben.
'He is coming to see us tomorrow.'—'Precisely.'
(21) Er begrüßte mich mit einem Schlag auf die Schulter, nach bayerischer Art eben.
'He greeted me by slapping my shoulder, according to Bavarian custom that is.'

6.2
CONFLICTING ROLES

Even though it seems justified to regard 'emphatic assertion of identity' as the central and most basic feature of the meaning of the focus particles *gerade, genau, eben* and at least some uses of *ausgerechnet,* the analysis given for these expressions so far is not yet complete. Especially *gerade, eben* and *ausgerechnet* express something over and above mere identity of two values. These three particles often carry an implication of dissonance or incompatibility concerning the two propositions over which they operate, regardless of whether both of these propositions are overtly given or not. These particles are typically used in contexts where the relevant propositions 'p' and 'q' do not usually go together. In other words, these contexts and these particles often suggest that there is an adversative or concessive relationship between the relevant propositions.[2] The following examples contain such typical contexts:

(22) Es ist allgemein bekannt, daß der Keim für den Sturz des Schahs gerade in der Erscheinung angelegt war, von der er zu glauben schien, daß sie ihn retten würde.
'It is generally known that the seeds of the Shah's destruction were sown in the very phenomenon he appears to have thought would save him.'

(23) Und auch Teilzeitarbeit wird zunehmend zur Mangelware. Gerade aber Teilzeitarbeit wird von nahezu 40 per cent der arbeitslosen Frauen gesucht.
'And even part-time work is becoming a scarcity. And it is precisely part-time work which nearly 40 per cent of the unemployed women are seeking.'

This suggestion of a general incompatibility is particularly clear in examples like the following where an expected concessive relation between two situations is rejected in favour of a causal connection. *Gerade* is particularly called for in such contexts and stresses the normal incompatibility between happiness and renunciation of worldly pleasures:

(24) Nicht TROTZ sondern gerade WEGEN ihres Verzichts auf irdische Outer sind die Amisch glücklicher als andere Menschen.
'It is not in spite of but because of their renunciation of worldly pleasures that the Amish are happier than other people.'

Moreover, *gerade* carries particularly strong concessive overtones in those cases where the particle occurs in the 'middle field', after a topicalised focus, and carries the nuclear tone:

(25) a. Nun werde ich geráde nicht nachgeben.
'Now I am less prepared than ever to give in.'
b. Wenn man Kinder bittet, etwas nicht zu tun, dann tun sie es geráde.
'If you ask children not to do something, that's exactly what they will do.'

'Adversative' or 'concessive' overtones are finally particularly clear in negative 'sentences' like the following:

(26) a. Er hat doch sein Examen bestanden?—Eben nicht.
'He did pass his exam, didn't he?—This is precisely what he did not do.'
b. Ich kann das Buch jederzeit bei einem Verlag unterbringen, bei dem ich selbst eine Reihe herausgebe.
—Genau das möchte ich eben nicht.
'I can easily get the book published by a publishing company where I am editor of some series myself. This is precisely what I don't want to do.'

This affinity between emphatic assertion of identity and dissonance, conflict or incompatibility is not only observable in German. The expressions that are used to translate *eben* and *gerade* into English are also frequently used in contexts expressing a dissonance:

(27) a. Labour has suffered a serious, and possibly fatal haemorrhage of support among the very people on whom it most depends…
b. As their economic power grew under the boom years of squandered oil revenues, the very elite on which the Shah's political power could have been based withdrew their passive support. (*New Statesman,* 13 July 1979, p. 47)
c. It is precisely the people who are least in need of our advice that come to see us.

In fact, the affinity is even more pervasive than the examples discussed so far suggest. Among the entities that can be asserted to be identical, it is probably points-in-time that provide the clearest examples of this tendency to combine an assertion of identity with an adversative or concessive interpretation. The connectives *at the same time, even as* and *while* in sentences like the following do not only have a temporal, but also a concessive interpretation:

(28) a. It is not easy to find examples of social services that are of general social benefit and, at the same time, not costly.

b. While our competitors are doing extremely well, our sales are declining.
c. Even as it admits a serious pollution problem, East Germany is substituting cheap brown coal for imported oil.

Given the generality of this tendency to combine an emphatic assertion of identity with an adversative or concessive interpretation, it seems plausible to look for a general pragmatic explanation of this phenomenon. Grice's theory of cooperative conversation provides a basis for such an explanation. The adversative and concessive implications in question can be analysed as standard interpretative enrichments of a literal meaning ('emphatic assertion of identity') derivable from the simple assumption that the speaker is observing the maxims of conversation. In contrast to formal languages, an emphatic assertion of identity between two values in two propositions in natural language is often pointless unless it is in some way remarkable. And such a quality of being remarkable is obviously attained in a context where two propositions are linked that normally do not go together. The principles that lead to an interpretative augmentation of an assertion of identity are principles of economy (cf. Horn, 1985b), i.e. Grice's second maxim of Quantity ('Do not make your contribution more informative than is required'), the maxim of Relevance and the maxim of Manner.

Such speaker-based principles of economy have a corollary on the hearer side, as formulated by Atlas and Levinson (1981) in their principle of informativeness, which instructs the hearer to amplify the informational content of an utterance by finding a more specific interpretation provided this is not controversial. Such interpretative enrichments always involve the assumption that stereotypical relations obtain between referents and situations. And it is precisely such stereotypical relations between situations or 'eventualities' that play a role in the interpretation of the examples discussed above, i.e. stereotypical assumptions about what does and what does not go together.

The conversational implicature that there is a dissonance or incompatibility between two eventualities, that typically accompanies an emphatic assertion of identity, may become part of the conventional meaning of the expression responsible for this assertion in the course of time. The historical development of connectives provides many examples of such a development from conversational to conventional implicatures (cf. König, 1985). A development of this kind can also be assumed to have affected the particle *ausgerechnet*[3] in German and its counterparts *uitgerekend* in Dutch and *davka* in Hebrew. *Ausgerechnet* invariably signals some dissonance between the eventuality denoted by the sentence in which the particle occurs and some contextually given eventuality. It was suggested in Chapter 3 that this particle can roughly be analysed as expressing an evaluation 'minimal' on a scale of suitability for a given purpose. Consider the following examples:

(29) a. Willst du ausgerechnet JETZT verreisen?
'Do you want to leave now of all times?'
b. Ausgerechnet während DER OPER ging meine Brille endgültig kaputt.
'It would be during the opera that my glasses finally broke.'
c. Ausgerechnet in SÜDAFRIKA nur wird der Versuch unternommen, diese rassistischen Schriften zu verbieten.
'Of all countries in the world, only in South Africa is an attempt being made to outlaw these racist publications.'

All of these sentences clearly imply that there is some incongruity. The focus value is the least suitable of all values under consideration for the relevant open sentence due to some background assumption or certain preferences of the speaker.

The English counterpart of *ausgerechnet* is the construction *a of all bs,* where *b* stands for a superordinate term of the focus expression *a*. By stressing the availability of many alternatives, this construction also indicates the 'inappropriateness' of the 'choice' that was actually made:

(30) a. You don't think I want to upset you, now of all times.
b. Charles suddenly began to press me about, of all the subjects, the works of Tolkien. (C.P.Snow, *Last Things,* p. 222)
c. He gave the money to Bill of all people.

d. A few minutes before we had to leave he was washing the car, of all things to do.

Certain uses of G. *gerade* also give the impression that an adversative implicature is beginning to become part of the conventional meaning of *gerade*. *Genau* and *eben* in German or *precisely* and *exactly* in English, on the other hand, have not been affected by such a development.

6.3.
HISTORICAL EVIDENCE

The clearest support for the assumption that focus particles whose basic function it is to assert emphatically the identity of two values in different propositions are typically augmented in their interpretation by adversative or concessive implications, which may become part of the conventional meaning of the particle itself, is provided by the historical development of *even* in English. Thanks to the thorough documentation and description given in the *Oxford English Dictionary,* we know more about the historical development of this particle than about that of any of the expressions considered in this chapter.

Up to Early Modern English, adverbial *even*—a cognate of G. *eben* and D. *even*—was used in senses closely related to the adjectival use of the same form, i.e. in the sense of 'flat, level, regular, equal'. In addition, the adverb was also used in 'weakened senses as an intensive or emphatic particle' with the meaning 'exactly, precisely, just' until the nineteenth century (cf. *OED,* s.v. *even* II). This assertion of identity could be applied to various notional parameters: manner, time, place, shape, etc. Some of these particle-like uses clearly meet the criteria formulated above for focus particles. In examples like the following, *even* is used to emphasise the identity of two values in different propositions, just like *eben* and *gerade* in Modern German:

(31) a. She that you gaze on so?—Even she I meane.
(Shakespeare, *Two Gentlemen of Verona,* II. i.)
b. What you will have it named, even that it is.
Shakespeare, *The Taming of The Shrew,* III. iv.)
c. But thus, I trust, you will not marry her.—Good sooth, even thus; therefore ha' done with words.
(Shakespeare, *The Taming of The Shrew,* III. ii.)
d. Be ye merciful, even as your Father is merciful.
(Luke, 6:32)

This use is marginal in Modern English and only preserved in the collocation *even as* 'just at the moment when'.

From the sixteenth century onwards, *even* came to be used as a focus particle in the sense of G. *sogar, selbst* or Fr. *même*. In Modern English, adverbial *even* is primarily used in this sense, i.e. as an additive and scalar particle, which evaluates its focus value as maximal for the prepositional schema in question. According to the widely quoted analysis by F. and L.Karttunen (1976), *even* induces a scale of likelihood: among the values under consideration, the value given is the least likely to satisfy the relevant open sentence. This and P.Kay's more recent analysis of Mod. E. *even* in sentences like (32) was discussed above:

(32) Even at this distance I could see that his body was rigid with distress.

This use, according to the *OED* (s.v. *even* 9) is 'rare in purely dialectal speech' and foreign to other West Germanic languages. The change from an emphatic marker of identity to the additive scalar particle, which evaluates the denotation of its focus as an extreme unlikely and thus a remarkable candidate is, however, only the result of a conventionalisation of an interpretative enrichment observable in typical uses of focusing *eben* and *gerade* in German. As pointed out above, identity is typically emphasised if it is in some way remarkable.[4]

The semantic development of the adjective *very,* from its original meaning 'true' (<Fr. *vrai*) to its modern usage, can be assumed to have been quite similar to the one described above for *even*. In Brugman (1984), two meanings of *very*

are distinguished: the 'extreme' sense and the 'precise' sense. In combination with NPs and superlatives, *very* picks out an extreme subpart of a graded area:

(33) a. She is at the very pinnacle of her career.
b. This bakery has the very best croissants I have ever eaten.
c. I found it at the very bottom of the box.

The use of *very* in examples like the following ('implicational scale use') is seen as a closely related phenomenon:

(34) a. The very mountains tremble when the gods become angry.
b. The very thought of writing a dissertation puts me into a cold sweat.
c. The very walls of the old city are full of history.

What *very* does in such sentences, according to Brugman (1984), is to identify an extreme value on an implicational scale in the sense of Fauconnier (1975a) and Horn (1972). Like superlatives in certain contexts, *very* has the force of a universal quantifier and can be paraphrased by *even*. Examples like the following illustrate the second of the two major uses distinguished by Brugman:

(35) a. She is the very person I have been waiting for.
b. She had on the very dress I tried on last week.
c. He uses this very pen.

Here *very* indicates the precise identity of two referents satisfying two different descriptions and means something like 'precise' or 'precisely'.

Considered in the light of the semantic development of *even,* this analysis does not seem to make the right division by grouping (33) and (34) together and opposing it to the use in (35). On the basis of both synchronic and diachronic considerations, it seems more adequate to oppose the use exemplified by (33) and (35), on the one hand, to that exemplified by (34). In both (33) and (35), *very* indicates precise identification and can be paraphrased by *precise* or *precisely*. The difference between these two types of examples is due to the meanings of the nouns with which the adjective collocates and also to the way in which the two referents whose identity is asserted are given. That (33) and (35) should not be analysed as involving different meanings of *very* is shown most clearly by 'minimal pairs' like the following:

(36) a. I found it at the very bottom of the box.
b. I found it at the very place where he had left it.

In (36)a., a location is identified directly, i.e. by a noun phrase, whereas (36)b. identifies the location via an event and thus indirectly. To postulate two different

meanings for *very* in these cases would suggest that the same should be done for *roughly* in the following pair:

(37) a. I found it roughly at the bottom of the box.
b. I found it roughly where he had left it.

It is the examples in (34) that should be regarded as instances of a separate use or meaning. This use is attested much later than the use exemplified by (33) and (35) (cf. *OED,* s.v. *very*) and can be assumed to have developed either from an interpretative enrichment of the 'precisely' sense along the lines described for *even* above or directly from the original meaning 'truly, verily'. Given the original metalinguistic use of *very* and *verily,* the second assumption is probably closer to the truth.

(38) a.

b. Verily the sky is riven with angels' singing.
c. The very sky is riven with angels' singing.

An emphatic assertion that something is truly ('verily') the case is only called for in problematic contexts, i.e. in those cases in which the focused expression is a remarkable and thus highly unlikely value for a prepositional schema. If this typical concomitant feature of relevant uses of *very* or *verily* becomes part of the conventional meaning of that word, it roughly acquires the meaning of *even*.[5] Note that examples like the following represent an intermediate step in this development. *Very* still has the meaning 'precisely' but carries clearly concessive overtones:

(39) It's her very cleverness that makes it difficult for her to work with other people.

7
Focus particles and phase quantification

In Chapter 2, *noch* and *schon* were included among the class of focus particles in German and these expressions were mentioned again in the discussion of the translational equivalents that *even* may have in various contexts. In this chapter we will take a more detailed look at this lexical distinction in German and similar distinctions in other languages, notably English. In addition to the use of these expressions as focus particles, we will also discuss their use as 'aspectual operators', i.e. the use in which they correspond to *still, already* and *yet* in English.

A lexical distinction similar to the one between G. *noch* and *schon* can be found in most, if not all, European languages (e.g. Fr. *encore —déjà; D. nog—al;* Russ. eščë—uže; Serbo-Croat još—već; Finn. *vielä—jo;* Swed., *än(nu)—redan*). Of the twenty European languages compared in Vandeweghe (1986), only Turkish and Albanian seem to lack a straightforward counterpart of *schon*. A distinction of this kind is also drawn in a wide variety of genetically and typologically unrelated languages outside of Europe, as the following examples show: Nahuatl *oc—ye* (Andrews, 1975:35); Jap. *mada—moo;* Mand. *hái—yijing;* Tagalog *pa—na;* Swahili *-ngali— -kwisha* (Ashton, 1947: 270f.); Korean *azik—imi* (Ramstedt, 1939:161).

The reason why the distinction between G. *noch* and *schon,* rather than the one between *still* and *already,* is made the starting-point of our discussion, is that the former pair is much more representative of the distinction typically drawn in the domain under investigation than the latter. *Noch* and *schon* are among the most frequently used and the most versatile expressions in German and have a wide variety of uses or meanings that interact, furthermore, with many grammatical subsystems. The use of *still* and *already* as 'aspectual operators', by contrast, is of relatively recent origin and this lack of time depth is certainly one of the reasons why these English expressions are more restricted in their use than related contrasts in other languages. If *already* and *still* appear as glosses for their 'counterparts' in other languages, they are typically used as one of several glosses.[1] Another peculiarity of English is that not two, but three expressions (i.e. *already, yet, still*) have to be discussed in the relevant domain. The relations

between these three expressions and their historical development are much easier to analyse if these questions are approached from a comparative perspective.

Noch and *schon,* as well as their counterparts in other languages, have received more attention in the last twenty years than any other particle discussed so far (cf. Traugott and Waterhouse, 1969; M. Doherty, 1973; C.Muller, 1975; E.König, 1977; Hirtle, 1977; Steube, 1980; Abraham, 1980; Hoepelman and Rohrer, 1981; Nerbonne, 1984; Vandeweghe, 1983; Löbner, 1987a, 1989). All of these analyses have contributed important insights and observations which can be used as a basis for the discussion that follows. My own analysis will most heavily draw, however, on the recent formal analysis by S.Löbner (1987a, 1989), which is clearly the most comprehensive and also most adequate analysis of the relevant domain available for any one language.

Let us now take a first look at the use of *noch* and *schon* as focus particles in examples like the following:

(1) a. Noch der Vierte blieb unter 47 Sekunden.
'Even the one who came in fourth recorded a time below 47 seconds.'
b. Noch am Grabe pflanzt er die Hoffnung auf.
'Even at his grave he does not abandon hope.'

(2) a. Schon die kleinste Aufregung kann gefährlich sein.
'(Even) the smallest excitement can be dangerous.'
b. Schon der Gedanke daran macht mich verrückt.
'The mere/very thought of it drives me out of my mind.'
c. Der Vorschlag muG schon deshalb abgelehnt werden, weil er nicht detailliert ausgearbeitet worden ist.
'The proposal must be rejected if only for the reason that (only because) it has not been worked out in detail.'

In sentences like these, *noch* and *schon* clearly exhibit the syntactic and semantic properties of focus particles discussed in previous chapters. The English glosses in (1) and (2) suggest that *noch* and *schon* belong to the 'additive' subclass, that they induce an order and also express an evaluation. To a certain extent, the scales induced by these particles are similar to the one associated with E. *even* or G. *sogar:* the focus value is characterised as a maximal value and perhaps we can also say as the most unlikely value for the relevant prepositional schema. After all, E. *even* is an appropriate gloss for such focusing uses of *noch* and *schon* and their counterparts in other languages.

This cannot be the whole story, however. It is true, there are cases like (3), where the contrast between *noch* and *schon* is almost neutralised and where they function more or less like E. *even* or G. *sogar:*

(3) Noch/schon der Versuch ist strafbar.
'Even the attempt is an offence.'

Neither in (1) nor in (2)c. are *noch* and *schon* interchangeable, however, and these expressions clearly differ in the contribution they make to the meaning of a sentence whenever their focus is a temporal expression:

(4) a. Schon 1950 wurde dies offensichtlich.
'This became obvious as early as 1950.'
b. Noch 1950 waren solche Probleme unbekannt.
'As late as 1950 such problems were unknown.'

Examples such as these suggest that *schon* picks out the beginning point of a temporal scale whereas *noch* picks out a point on the other end of such a scale. As a consequence, the focus value is evaluated as 'relatively early' in the former case and 'relatively late' in the latter. The alternatives under consideration in the two cases differ accordingly: they are earlier times than the one given in the case of *noch* and later times in the case of *schon*.

Such an analysis of *noch* and *schon* in terms of the parameters developed in Chapter 3 is certainly capable of throwing some light on the use of these expressions as focus particles, since it reveals similarities and differences with regard to other members of this class. It is, however, a serious deficiency of such an analysis that it establishes no relation between the use of these expressions as focus particles and other, more basic uses from which the focusing use is clearly derived. It is therefore to these more basic uses that we now turn.

7.1. *NOCH* AND *SCHON* AS ASPECTUAL OPERATORS

One of the most striking properties of *noch* and *schon* and their counterparts in other languages is the interaction of these expressions with the system of aspectual distinctions available in a language. It therefore seems appropriate to say a few words about aspect at this point.[2]

The most basic distinction, a distinction probably found in all languages, is the one between imperfective and perfective aspect. Imperfective sentences like *Fred is sick* are about states, which in the terminology of some linguists also include processes. States are properties of times. At any given time, a state 'p' either obtains or does not obtain. In the latter case a state '¬ p' obtains. In other words, states can be negated. Sentences in the imperfective aspect express that a state obtains at a certain 'reference' time. States can therefore be considered as one-place predicates over temporal individuals. Perfective sentences (e.g. *Becker won the match*), by contrast, relate to events and the localisation of events in time. Events take place and involve a change of state. Events can be classified and counted and therefore be considered as abstract individuals. Localising an event in time means specifying an interval, either through tense or a frame adverbial, within which the event takes place.

The aspectual character of a sentence is determined by various factors which interact in a hierarchical fashion. Whether a sentence expresses imperfective or perfective aspect is primarily a question of the *aktionsart* of the verb. Verbs can be classified into those denoting states or processes (e.g. *run, know, be asleep*) and those denoting events (e.g. *dive, leave, die*). A further contribution to the aspectual character of a sentence comes from the complements and adjuncts with which the verbs combine to form a VP. *Run* by itself denotes a state (or process), *run a mile* denotes an event. On an even higher level, aspectual operators make their contribution. The introduction of the progressive or the perfect into an English sentence results in an imperfective sentence.

The basic use of *noch* and *schon, still—already* and related expressions in other languages is represented by occurrences of these expressions as sentential operators in imperfective sentences such as the following:

(5) a. Hans schläft noch.
'Hans is still sleeping.'
b. Hans ist noch ledig.
'Hans is still single/unmarried.'

(6) a. Hans ist schon wach.
'Hans is already awake.'
b. Hans ist schon verheiratet.
'Hans is already married.'

Only in such cases is it possible for *noch* and *schon* to occur in the forefield by themselves:

(7) a. Noch schläft Hans.
'As yet Hans is sleeping.'
b. (Und) schon ist er wach.
'(And) already he is awake.'

These expressions are not actually incompatible with perfective sentences, but whenever they combine with such a sentence they either change its aspectual character or receive a somewhat different interpretation. We will return to this point below.

The fact that *noch* and *schon,* as well as their counterparts in other languages, are typically analysed together reflects an important intuition about their relatedness: *noch* and *schon* are dual operators (cf. Löbner, 1987a). As pointed out before, two operators are dual if the inner negation of one is equivalent to the outer negation of the other (cf. Barwise and Cooper, 1981:198ff.). The claim that *noch* and *schon* are duals thus amounts to the claim that we have the following equivalence relations for any imperfective sentence 'p':

(8) a. ¬ (schon p)≡noch (¬p) b.

c. ¬ (noch p)≡schon (¬p) d.

That (8)a. and b. are equivalent is easy to demonstrate. The second sentence of the following pair is clearly the negation of the first:

(9) a. Hans ist schon verheiratet.
'Hans is already married.'
b. Hans ist noch nicht verheiratet.
'Hans is not married yet.'

The equivalence relation between (8)c. and d. can be illustrated with the following pair of sentences:

(10) Hans ist nicht mehr ledig≡Hans ist schon verheiratet.
'Hans is no longer single'≡'Hans is already married.'

The fact that (10) does not look at first sight like an instance of the equivalence relation described in (8)c. and d. is owing to two substitutions: after a preceding *nicht* 'not', *noch* is generally replaced by its suppletive form *mehr* and the clumsy *nicht ledig* 'not single' was replaced by the affirmative expression *verheiratet* 'married'.

The dual relationship between aspectual operators like G. *noch* and *schon* is reflected differently in the forms used in different languages. Of the four patterns in (8), only (8)b. and c. are used in declarative sentences in German. In Slavic languages the expressions with the inner negation, i.e. (8)b. and d. tend to be preferred:

(11) a. Russ. eščë 'still'—uže 'already'
b. Ešče ne 'not yet'—uže ne 'no longer'

In Nahuatl, by contrast, the expressions with the outer negation are used (Andrews, 1975:25ff.):

(12) a. ye 'already'—oc 'still', ah 'not'
b. Aya 'not yet'- ayoc 'no longer'
not-already not-still

And, as will be shown below, the same is true of English, where *yet* and *anymore* can be analysed as suppletive forms of *already* and *still,* respectively, in declarative sentences.[3]

(13) a. already—still
b. not yet—not anymore

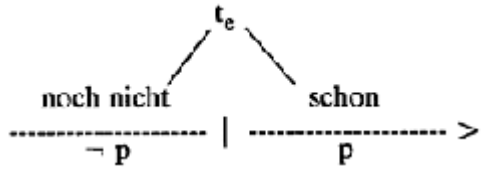
Löbner's analysis of G. *noch* and *schon,* which will now briefly be summarised, is based on a representation in which both the imperfective sentence these operators combine with and the reference point to which these sentences refer implicitly or explicitly appear as arguments of these operators:[4]

(14) schon (t_e, p); noch (t_e, p); noch nicht (t_e, p); nicht mehr (t_e, p)

Löbner notes that the semantic relations between these expressions described above (i.e. *noch* is the dual of *schon, noch nicht* is the external and *nicht mehr* the internal negation of *schon*) constitute an important criterion of adequacy for any semantic analysis of these operators. Since the semantic analysis of negation can be assumed to be given, any analysis of one of these four expressions is also an analysis of the remaining three. All earlier formal analyses are rejected by Löbner because of their inability to account for these relations.

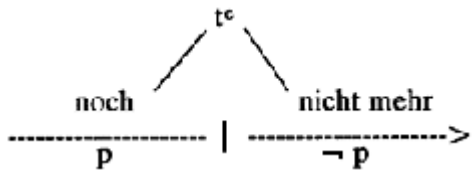
What sentences with these aspectual operators basically do, according to Löbner, is to pick out a sequence of alternating phases 'p, —p' of some state 'p' and to locate a reference time t_e in such a sequence. Sentences of the general form (14) are true if t_e is located at a certain point in such a sequence of positive and negative phases. More specifically, *schon* (t_e, *p)* is true if t_e falls into a positive phase 'p' after a preceding negative phase '—p'. During this preceding negative phase *noch nicht* (t_e, *p)* is true:

(15)



A sentence of the general form *noch* (t_e, *p),* by contrast, is true if t_e falls into a positive phase 'p'. Such a sentence is false and its opposite *nicht mehr* (t_e, *p),* is true if t_e falls into a following negative phase '—p':

(16)



The formal definition of the truth conditions and presuppositions given by Löbner (1985:101) makes use of the ancillary notion 'last earlier starting-point of p before t_e' (abbreviated as LESP(t_e, p)), whose formal definition is of no interest in this context. With the help of this notion, Löbner defines the truth conditions and presuppositions of the expressions in (14) as follows:

(17)

a. **schon** $(t_e, p) = \exists t(LESP(t_e, \neg p) \leq t < t_e \,\&\, p(t))$ 'already'

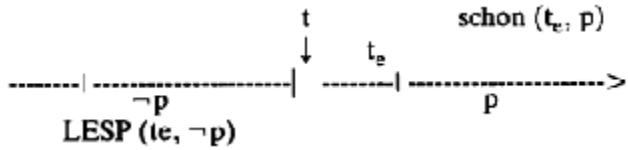
b. **noch nicht** $(t_e, p) = \neg \exists t(LESP(t_e, \neg p) < t \leq t_e \,\&\, p(t))$ 'not yet'

c. **noch** $(t_e, p) = \neg \exists t(LESP(t_e, p) < t \leq t_e \,\&\, \neg p(t))$ 'still'

d. **nicht mehr** $(t_e, p) = \exists t(LESP(t_e, p) < t \leq t \,\&\, \neg p(t))$ 'not anymore'

The formalisation given in Löbner (1989:180) differs somewhat from this earlier version, but these differences are of no importance for the present discussion. Translated into simple prose, the truth conditions formulated for *schon* specify that there is a time *t* following the last negative phase, but identical to or preceding the reference time t_e which falls into a positive phase 'p'. The following diagram presents such a situation:[5]

(18)



The other formulae have to be read analogously. Notice that the criterion of adequacy mentioned above is met: *noch* comes out as dual of *schon, noch nicht* as external negation of *schon* and *nicht mehr* as internal negation. The meaning of aspectual operators is thus analysed by Löbner as one manifestation of a very general conceptual schema for which he coined the term 'phase quantification' (cf. Löbner, 1987a). Phase quantification is defined as a 'simple way of modifying plain yes/no predications by focusing on the transition from a positive to a negative phase (or vice versa) on some scale'.

One point that the preceding summary should have also made clear is that Löbner argues for a strictly minimalist or radically pragmatic position in his analysis of *noch* and *schon*. Many of the properties assigned to the meaning of these expressions by many previous analyses are regarded as a matter of pragmatics, i.e. as properties of certain verbal contexts or as due to general maxims of conversation. Notice, for instance, that Löbner's truth conditions do not include any specifications for the time after 't_e'. The fact that *noch* or *still* cannot be used with predicates denoting irreversible states like *old* (* *He is still old*)

is simply a consequence of the fact that the aspectual operators (or 'phase quantifiers') can only be used in situations where we have a succession of positive and negative phases of some state. Another claim that Löbner rejects is the idea that *noch* and *schon* always express the evaluations 'late' and 'early', respectively. That such evaluations may indeed be expressed is simply a consequence of the fact that sentences with these expressions are used with particular relevance in situations where the relevant transition or lack of transition from one phase to another is in contrast to what is expected. Finally, Löbner's truth conditions do not require that the reference time t_e be very close to the transition point, i.e. very near the transition into a negative phase in the case of *noch* and shortly after the transition point in the case of *schon*. The fact that these expressions are typically used in this way—*noch* often suggests that a negative phase will follow soon and *schon* suggests that t_e is close to the beginning point of a positive phase—is simply a matter of the Gricean maxim of Relevance. It is precisely in such situations that the use of the aspectual operators is most relevant.

Löbner's radically pragmatic analysis is, of course, not incompatible with the assumption that certain evaluations and implications of contrast and peripheral placement are invariably associated with certain uses of *noch* and *schon* as a consequence of certain syntactic and phonological properties of a sentence or as a consequence of the co-occurrence with other lexical items. The fact that a sentence-initial *noch* strongly suggests an imminent change seems to be a consequence of the double focusing (on *noch* and on the assertive mood) that gives rise to this syntactic position of *noch:*

(19) Nóch hàben wir genug Geld.
'So far we have still got enough money.'

Plausible alternatives brought into play by this double focusing are ordered pairs consisting of a later time (e.g. 'soon') and a qualified negation ('perhaps not'). Whether the same factor is responsible for the evaluation typically associated with an initial *schon* (or *already*) is not quite clear to me:

(20) a. Schon beklagen sich einige Leute.
b. Already some people are complaining.

The fact that *noch* and *schon* invariably express evaluations in combinations with *immer* 'always' can be attributed to the meaning of that adverb:

(21) a. Er ist noch immer nicht zu Hause.
'He is still not at home.'
b. Wir haben das schon immer so gemacht.
'We have always done it like that.'

And in the case of the use of these expressions as focus particles, there seem to be good reasons to assume that the evaluations associated with typical uses of the homophonous aspectual operators have become part of the conventional meaning of this focusing use.

7.2. PERFECTIVE AND ADDITIVE USES OF *NOCH*

In sentences denoting events, *noch* and *schon* do not normally have the interpretation described in the preceding section. True, these expressions may have the effect of changing the aspectual character of the sentence they combine with from perfective to imperfective, as in the following examples:

(22) a. Hans putzte noch seine Schuhe.
'Hans was still cleaning his shoes.'
b. Hans putzte schon seine Schuhe.
'Hans was already cleaning his shoes.'

The higher the relevant predication ranks, however, on a scale of transitivity, the more likely it is that *noch* and *schon* will have a different interpretation. In examples like the following, *schon* is interpreted as an emphatic assertive ('modal') particle and *noch* characterises an event as culmination of a development leading up to that event:

(23) a. Hans findet den Schlüssel schon.
'Hans will find the key, no doubt.'
b. Hans findet den Schlüssel noch.
'Hans will find the key eventually/yet.'

Since *schon* has a modal interpretation in such contexts, it cannot be the dual of *noch*. We will therefore only be concerned with the 'perfective' use of *noch* in this section. Modal particles will be discussed in the final chapter.

The 'perfective' interpretation of *noch* is not simply a consequence of a perfective context combining with this particle. Just as *noch* and *schon* may force an imperfective interpretation in a perfective context, *noch* may manifest a 'perfective' meaning in imperfective sentences. The English glosses given for the following German sentence show that two interpretations are possible: *noch* may have the interpretation described in the preceding section, but also a 'perfective' interpretation. The latter would be the only plausible one if (24) is used as a prediction after an unsuccessful interrogation:

(24) Hans redet noch.
'Hans is still talking/Hans will speak yet/eventually.'

The 'perfective' interpretation of *noch* is forced, whenever *noch* combines with adverbs like *schließlich,* 'eventually', *eines Tages* 'one day', with modal *schon,* etc., regardless of the *aktionsart* of the predication.

This suggests that the 'perfective' use of *noch* cannot simply be a different manifestation of the 'aspectual' or continuative use described in the preceding section, but has to be distinguished from it as a separate reading. On the other hand, it seems to be a widespread phenomenon that the 'imperfective' ('continuative') meaning described in 7.1. and the 'perfective' meaning to be discussed in this section are expressed by the same form. The counterparts of G. *noch* in many European languages (e.g. Russ. *eščë,* Serbo-Croat još, Fr. *encore,* D. *nog,* Pol. *jeszcze,* Finn, *vielä*) may also have both interpretations:

(25) (G.) Wir gewinnen noch.
(D.) Wij gaan nog winnen.
(Fr.) On va encore gagner.
(Pol.) Jeszcze wygramy.
'We will win yet.'

Languages like English and Hebrew, which draw a distinction between *still—yet* and *adayin* 'still, (not) yet'—*od* 'more, additional, another, further, yet', respectively, are exceptional rather than typical cases in this respect. The fact that these two 'meanings' are often associated with the same form suggests that they are closely related and that if they are different meanings at all, one must be regarded as a natural extension of the other.

Let us now look at the 'perfective' use of *noch* in more detail in connection with sentences like the following:

(26) a. Wir gewinnen noch.
b. Wir werden noch gewinnen.
'We will win yet.'
c. Wir haben noch gewonnen.
'We did win after all.'

(27) a. Er wird sich noch zu Tode arbeiten.
'He will end up working himself to death.'
b. (Nicht die Schotten sondern die Engländer haben bestimmte Zeiten für das Trinken festgelegt.) Als nächstes werden sie noch Zeiten für das Sterben festlegen.
'It was the English who made hours for drinking, not the Scots. They'll be making hours for dying next.'

The sentences in (26) show that the 'perfective' use of *noch* may co-occur with all three tenses in German. As already noted, such sentences express in the future tense that a development is under way at the moment of speaking which will culminate in the event described in the sentence. Examples like (26) strongly

suggest that 'perfective' *noch* has a further semantic property: these sentences express that the event in question ('we-win') is surprising and unexpected in view of what happened before. Sentences like (26)a.–b. would be used in a situation where the opposite team is in the lead and (26)c. would be used in a report where the addressee left the game in precisely such a situation. In other words, we find again the implication that the content of the sentence is in conflict with what is expected, an implication that was not assumed to be part of the conventional meaning of 'imperfective' *noch*. Similar observations have been made with regard to *yet,* the English counterpart of perfective *noch*. Ladusaw (1980:126) points out that the following sentence would be used if John has been doing badly all along in a race, but there is now a possibility of success:

(28) John could win the race yet.

On the basis of examples like (26), Abraham (1980:20) concludes that an 'implicature of counterexpectation' is part of the meaning of 'perfective' *noch* (=$noch_2$). But if sentences like (27) manifest the same use of *noch,* this cannot be the case. In (27), the relevant event is characterised as a natural consequence of some development, rather than as something surprising or unexpected. Again, it seems therefore preferable to adopt a minimalist approach in the analysis of perfective *noch* and to regard the 'implicature of counterexpectation' as a matter of pragmatics.[6]

So far, no fully adequate formal analysis is available for the 'perfective' use of *noch*. In the analyses provided by Abraham (1980) and Hoepelman and Rohrer (1981) this use of *noch* comes out more or less as the opposite of the imperfective use. An expression of the form $noch_2$ (t′, Φ) is true iff Φ is true at t′ and false during an interval preceding t′, i.e. t<t′. But such an analysis, which assigns more or less opposite meanings to two uses of the same form is hardly a convincing one. As already pointed out, the 'implicature of counterexpectation', which Abraham regards as an essential ingredient of $noch_2$, is not part of the conventional meaning of that expression either.

A more interesting proposal is made in König and Traugott (1982), where an attempt is made to give a univocal analysis of *noch*. König and Traugott see the essential property shared by all uses of *noch* in an 'additive function', roughly describable as 'adding up to a larger whole'. This operation of addition can be applied to objects as in (29), to states as in (5)–(6) and to events as in (26)–(27):

(29) a. Ich trinke (auch) noch ein Biér.
'I will have a beer, too.'
b. Ich trinke noch ein Bier.
'I will have another beer.'

If a state is added to a state of the same kind, so the argument goes, the result is the meaning 'continuation of a state' found in (5)–(6). If an event is added to a

state (or process), however, the overall meaning is that of a development culminating in an event, as in (26)–(27). So what *noch* does in sentences like (26)–(27), according to König and Traugott, is to add an event to a process, both of which are part of a more comprehensive event (i.e. of a game, a race, etc.). This proposal has some intuitive plausibility, but it fails on other counts. Apart from not being worked out in sufficient detail, it fails to account for the dual relationship between 'imperfective' *noch* and *schon* and the lack of such a relationship in the case of 'perfective' *noch*.

The most interesting proposal made so far with respect to the analysis of perfective *noch* is the one given in Löbner (1989). Löbner notes that sentences of the type (26) and (27) express existential statements, since the negations of such sentences deny the existence of events of the relevant type:

(26′) Wir gewinnen nicht mehr.
'We won't win any more.'

The truth conditions of a sentence like (26)a. are described by Löbner as follows:

(30) $(\exists e)$ (Wir-gewinn-(e) & non-past (e) & noch (πe), P))

In this formula, *e* is a variable for individual events, *wir-gewinn-* ('we'll win') describes the event type and π is a function that assigns to each event the time that it takes up. So what (30) says, as an analysis of (26)a., is that there will be an event of the type 'we-win' and that this event takes place before a certain phase 'P' ends, which began before π (e) and is connected with some previous course of events.

This is certainly a good approximation to what is expressed by the relevant sentences. The assumption that tense is outside the scope of *noch* in such sentences accords well with certain facts of German and, as we will later see, also of English. Parsimony is another advantage of Löbner's analysis: the 'perfective' use is just another manifestation of meaning found in the imperfective contexts. But such an analysis is based on the assumption that the so-called 'imperfective' and 'perfective' uses of *noch* are in complementary distribution and that it is the aspectual character of the sentence combined with *noch* that determines the use of that operator. In view of what was said above about the co-occurrence of the 'imperfective' use of *noch* with event predications, this is a somewhat problematic assumption. Another problem with Löbner's analysis concerns the phase 'P' in (30). An analysis which merely requires that the time taken up by the relevant event is part of a phase 'P', leaves too much to pragmatics.

Even though it does not seem to be justified to regard the additive use of *noch* in sentences like (29) as holding the key to an understanding of the 'perfective use' or even all uses of that expression, as is done in König and Traugott (1982),

it is obvious that there is a close relationship between the additive use and the perfective use. In addition to examples like (29), I will also regard the following sentences as instances of this additive use:

(31) a. Möchtest du noch etwas?
'Would you like anything else?'

b. Kaffee wird noch lange Zeit ein Luxusartikel bleiben.
'Coffee will remain a luxury for a long time to come.'
c. Es sind noch fünf Runden bis zum Ziel.
'There are five laps to go.'
d. Hans ist noch größer (als Paul).
'Hans is even taller (than Paul).'

This additive use of G. *noch* has a clear parallel in many other European languages. The counterparts of *noch* in French *(encore),* Russian *(eščë),* Finnish *(vielä),* Dutch *(nog)* and Turkish *(daha)* can be used in a similar way:

(32) G. *noch einmal* 'once more'; Fr. *encore une fois;* Russ. *eščë raz;* D. *nog een keer;* Finn, *vielä kerran;* etc.

Yet and *still,* the two English counterparts of G. *noch,* can only be used in this additive function under very specific conditions:

(33) a. One theory…another theory…yet another theory…
b. Some say…others say…still others say…
c. I think I am good for some time yet.
d. John is taller still/yet.

The property that the examples in (29) and (31) share is that a quantity of some kind is added to another, contextually given quantity. Even though *noch* does not contrast with other focus particles in such contexts and may even combine with *auch, nur, sogar,* etc., it is tempting to regard this expression as a special case of a focus particle in such sentences. A comparison with *auch* 'also' is particularly useful for any attempt to describe the properties of additive *noch*. In the following examples, *noch* and *auch* make a very similar contribution to the meaning of the relevant sentences. It is therefore not surprising that these two expressions may be combined:

(34) a. Hans besitzt auch EIN HAUS.
'Hans also owns a house.'

b. Hans besitzt noch EIN HAUS.
c. Hans besitzt auch noch EIN HAUS.

Both *noch* and *auch* presuppose that there are alternative values satisfying the prepositional schema 'Hans owns x', but *noch* carries an additional implication which makes (34)a. a more suitable expression if what is at issue is an exhaustive enumeration of Hans's property. 'Adding up to a larger whole' was suggested above as a gloss for this additional implication. If we think of this larger whole as a connected 'phase' of some kind, we have established a link between the 'additive use' of *noch* and the uses discussed above.

Examples like the following show that additive *noch* is not subject to a constraint found to be relevant for all focus particles discussed so far, with the exception of E. *too:*

(35) a. Hans besitzt nóch ein Haus.
'Hans owns another house.'
b. Hans hat nóch etwas Suppe gegessen.
'Hans had some more soup.'

The alternatives under consideration as a result of the interaction between a focus particle and a specific focusing have to be distinct from the value of the focused expression in all cases discussed so far. In sentences with additive *noch,* the alternative value can simply be another quantity or instance of the same kind. Thus (35)a. implies that Hans owns (at least) two houses. Such non-distinctness is always indicated by a stress on *noch*.

7.3. THE DISTRIBUTION AND HISTORICAL DEVELOPMENT OF *STILL, ALREADY* AND *YET* IN ENGLISH

Against the background of the preceding analysis of *noch* and *schon* in German, it is now much easier to discuss the distribution, meaning and use of the English counterparts of these expressions. As already mentioned, three expressions have to be listed as English counterparts of a two term lexical contrast in German and other languages, namely *still, yet* and *already*. The peculiar element in this list is *yet*. Whereas *already* and *still* translate straightforwardly into German as *schon* and *noch,* respectively, *yet* can correspond to either of these elements depending on the context. *Yet* translates as *noch* in affirmative modal contexts (cf. (36)), but as *schon* in negative-polarity (downward-entailing) contexts (cf. (37)):

(36) (E.) John could win the race yet.
(G.) Johann könnte das Rennen noch gewinnen.

(37) (E.) Has Fred moved to London yet?
(G.) Ist Fritz schon nach London umgezogen?

To see why this is so, it is necessary to take a look at the historical development of these operators in English.

The asymmetry in the lexical structure of English and German illustrated by (36) and (37) is due to semantic changes which led to a re-analysis of *yet* in negative contexts and to a grammaticalisation of *still* and *already* as aspectual operators.[7] In Old and Middle English, *yet* (spelled *get, giet, gyt,* etc.) had more or less the same range of uses as Modern German *noch*. This particle occurred in all contexts for which it is available today as well as in all the affirmative contexts from which it is now excluded. The following examples show that *yet* was still used in all kinds of affirmative contexts as late as the eighteenth century:

(38) a. Therfore my theme is yet, and evere was. (Chaucer, *The Pardoner's Tale,* 1. 425)
b. Meanewhile prepare our breakfast. For yet ere noone wele take horse and away. (*OED,* s.v. *yet,* 3b., 1592)
c. Though yet of Hamlet our dear brother's death the memory be green…(Shakespeare, *Hamlet* I.ii.1)
d. I had a very early Ambition to recommend myself to Your Lordship's Patronage, which yet encreased in me as I Travell'd through the Countries (*OED* s.v. *yet,* la, 1705)
e. Cum gytt, and thou shalt fynde My ne endlys mercy and grace (*OED,* s.v. *yet,* 5b., 1529)

Note that *yet* could combine both with imperfective contexts (cf. (38)c.) and with perfective contexts (cf. (38)e.) and thus could indicate both continuation and culmination, just like German *noch*. In *Ælfric's Grammar, yet* is used not to gloss *adhuc* but rather a Latin future or future perfect: *amabo—ic lufige gyt to dæg oppe to mergen* 'I will love yet.' Because of its futurate implications in perfective contexts, *yet*—so it seems—was the most suitable expressive device for explaining the use of a grammatical category not available in Old English. There was no clear counterpart of Mod. E. *already* or German *schon* in Old English. In spite of a related meaning, *gearo (gearwe)* was rarely used to translate Latin *iam*.

In the Middle English period, *stille* 'quietly' and *all ready* 'all prepared' were grammaticalised as aspectual sentence operators. This meant that *still* was now available for roughly the same functions as *yet* and thus gradually replaced the latter in certain affirmative contexts. The gradual exclusion of *yet* from affirmative contexts was the result of a reinterpretation of this expression and a reanalysis of its relative scope in negative contexts. Given that *yet* was originally used in the sense of German *noch* in all affirmative environments, we have to

assume that this particle originally had wide scope over negation and the same meaning in negative sentences. Thus, except for the linear sequence of elements, the compositional make-up of negative sentences with *yet* was exactly parallel to that of their counterparts in German.[8]

(39) (E). (John is not here) yet.
(G). Noch (ist Johann nicht hier).

Beginning in Early New English (ENE) structures like (39)e. were reinterpreted, i.e. the overall meaning of such sentences was derived from a different structural analysis and a different interpretation of the components: the leftmost operator *(not)* was assigned wide scope over *yet* and the aspectual particle was interpreted in the sense of German *schon* or Mod. E. *already* (cf. Ladusaw, 1977; König and Traugott, 1982).[9]

(40) Not (John is here yet)
(=already)

The basis of this reanalysis was the dual relationship between *yet* in its old meaning ('still') and *yet* in its new interpretation ('already').

As a consequence of this reanalysis, *yet* was gradually excluded from affirmative contexts and replaced by *still*. In addition, *yet* was also reinterpreted in the sense of 'already' or G. *schon* in negative-polarity contexts other than explicit negation. That this semantic change was still going on in the seventeenth century is shown by the following two examples from Shakespeare (cf. König and Traugott, 1982):

(41) a. Hath yet the deputy sent my brother's pardon?
(=*already*) (Shakespeare, *Measure for Measure* IV.iii.118)
b. What my Lady Disdain—Are you yet living?
(=*still*) (Shakespeare, *Much Ado About Nothing* I.i.119)

What is the situation in Modern English after reanalysis and after the extension of the reinterpretation of *yet* to all negative-polarity contexts? First, except for a few relics like (42), the aspectual operator *yet* is excluded from imperfective affirmative contexts:

(42) a. It's early days yet, of course.
b. I think I am good for some time yet.
c. There is yet hope that he will recover.

In the context of imperfective predications (in declarative sentences),[10] *yet* and *already* are in complementary distribution, so that the former can be regarded as some kind of suppletive form of the latter:

(43) a. He is already here.
b. He is not here yet.
(44) a. Can you speak the language yet?
b. Yes, I can speak it already.
(45) a. But he could scarcely yet bear to think of the recent past as real.
b. But he could already think of the recent past as real.

In such contexts, *yet* clearly contrasts with *still*. In the context of event predications, however, i.e. in contexts where we have spoken of the 'perfective' use of *noch,* no reanalysis of the scope of *yet* or reinterpretation of this particle took place. So, *yet* is still used in such affirmative contexts in its original interpretation, i.e. roughly in the sense of German *noch*. In such contexts, the contrast between *yet* and *still,* if any, is much more subtle:

(46) a. I have yet to meet a generous Scotsman.
b. (Excuse me.) I still have to meet a generous Scotsman (namely Bill Stewart).
(47) a. John could win the race yet.
b. John could still win the race.
(48) a. You may yet buy the horse.
b. You may still buy the horse.
(49) There are still some things we have yet to imagine.
(advertisement for the movie *Sophie's Choice*)
(50) a. A complete grammar for any significant fragment of language is yet to be written.
b. Now the Diary is finished and only the companion volume is still to appear.

Yet and *still* are very similar in their interpretation in pairs like the ones listed above. A subtle difference remains, however, even though it may only become apparent under specific conditions. The contrast is perhaps clearest in (46), where the indefinite NP is used referentially in (46)b. but not in (46)a. Furthermore, (46)a. expresses doubt that people fitting the description exist and suggests a continuation like 'before I believe that such people exist'. There is also a contrast between the members of the next pair. The second sentence (i.e. (47)b.) would typically be used to express hope if John has been showing well in the race and then his fortunes dip slightly, while (47)a. could be used if John had been doing badly all along but there was suddenly a possibility of success (cf. Ladusaw, 1980:126). *Yet* in (48)a. expresses the possibility of a development that culminates in the given transaction, whereas *still* in (48)b. indicates that the possibility of buying continues to exist. In (50), finally, an expression of doubt with respect to the possibility of writing a complete grammar contrasts with the description of a standing obligation.

The preceding discussion shows that *yet* functions more or less like 'perfective' *noch,* in affirmative sentences like (46)–(50). If we now assume that *yet* and *still* do not differ in the contribution they make to the meaning of such sentences, just as 'imperfective' and 'perfective' *noch* do not differ according to Löbner's analysis, the contrast between pairs such as (46)–(50) can only be due to a difference in the relative scope of the operators in each sentence. The two sentences in (47), for example, can be assumed to differ as follows:

(47′) a. possible ((John win-the-race) yet) (='noch')
b. still (possible (John win-the-race)) (='noch')

Since *yet* occurs inside the scope of the modal operator, it combines with a perfective context and has thus the interpretation assigned to the 'perfective use' of *noch* above. *Still,* on the other hand, combines with an imperfective context and thus implies that the reference time falls into a positive phase of the state described in the sentence.

Such an analysis would allow us to regard the meaning of (46)–(50) as essentially compositional and to formulate the following restriction of the use of the aspectual operator *yet* in Modern English:[11]

(51) *Yet* can only occur in the scope of a modal operator or a negative-polarity context. The 'relics' mentioned in (42) are the only exception to this generalisation.

The assumption that sentences like (46)–(50) are compositional in their meaning is preferable to the view that affirmative constructions with *yet* are all idiomatic. This assumption of compositionality is clearly justified for examples like (47) and (48). The other examples are unproblematic, too, if we assume that they are elliptical expressions of necessary conditions for a belief:

(52) a. I have yet to meet a generous Scotsman (before I believe that such people exist).
b. necessary ((I met a generous Scotsman) yet)

The contextually given *before*-clause marks the end of the phase 'P' which includes the event described in such sentences.

7.4. FOCUS PARTICLES AS PHASE QUANTIFIERS

The use of expressions like G. *noch* and *schon* as aspectual operators provides the basis for the use of these expressions as focus particles. The assumption that the latter use is an extension of the former can be based on considerations like the following. In some languages, focus particles are clearly derived from

aspectual operators like *noch* and *schon*. The Finnish counterparts of E. *even, vieläpä* and *jopa,* for example, are derived from *vielä* 'still' and *jo* 'already' by the addition of the clitic *-pa/-pä,* which emphasises assertion and discourages response (cf. F.Karttunen, 1975:35).[12] Expressions like *noch* and *schon* are not used as focus particles in all the languages that provide the basis for this study, but whenever they exhibit this use, they are also used as aspectual operators. In other words, there seems to be the following correlation:

(53) If NOCH and SCHON are used as focus particles in a language, they are also used as aspectual operators.

In the discussion that follows, we will again consider the relevant facts in German before we look for related phenomena in English. It will be shown that only modest beginnings of a use of *already* and *still* can be found that could be subsumed under the label 'focus particle'. This difference between English and German seems to be a consequence of the elimination of *yet* from many affirmative contexts and of the relatively short history of the operators *already* and *still*.

There are at least two uses of *noch* and *schon* as focus particles. In the first one, *noch* is the dual of *schon;* in the second, *erst* rather than *noch* is the dual of *schon*. According to the analysis given in Löbner (1989), all three expressions are phase quantifiers. The conceptual schema discussed above in connection with the aspectual operators is also relevant for the analysis of these expressions as focus particles.

The first of the two uses distinguished above can be observed in examples like the following:

(54) a. Paul ist noch gemäßigt.
'Paul is still moderate.'
b. Peter ist schon radikal.
'Peter is already radical.'

Noch and *schon* do not exhibit the typical syntactic behaviour of focus particles in such sentences. They cannot be shifted into the forefield together with a co-constituent, nor would one want to call the stressed element in such sentences their focus. On the other hand, these expressions cannot be considered as instances of the aspectual operators discussed in 7.1. either. Interchanging the positions of *noch/schon* and the subjects in (54) results in a completely different interpretation:

(55) Noch ist Paul gemäßigt.
'So far Paul is still moderate.'

Instead of the temporal scales found in (55) and the examples discussed in 7.1., we found non-temporal scales in (54): persons are ranked on a scale of radicalism. What examples like (54) share with those of type (5), (6) or (8), however, is not only the ranking of entities along a scale, but also the fact that two phases are distinguished, identifiable in this case by a pair of antonymous adjectives. It therefore seems appropriate to analyse *noch* and *schon* as operating over a structured proposition and to base the semantic analysis of these sentences on the following representations:

(54′) a. noch (λx[x ist gemäßigt], Paul)
b. schon (λx[x ist radikal], Peter)

On the basis of these representations, we could now formulate the truth conditions and presuppositions of *noch* and *schon* analogously to those formulated above for *also* and *even*. *Noch* and *schon* can be analysed as scalar additive particles: the alternatives under consideration precede the focus value in the case of *noch* and follow it in the case of *schon* (cf. König, 1977).

This analysis is, however, inadequate for at least two reasons. It is counter-intuitive to analyse the subject as focus in such sentences. After all, it is the predicate rather than the subject that carries the nuclear tone in such sentences and a negation again relates to the predicate rather than the subject:

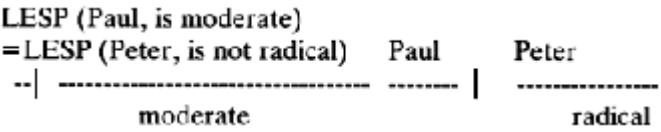
(56) a. Paul ist nicht mehr gemäßigt. ‘Paul is not (a) moderate any more.’
b. (=) Paul ist schon radikal. ‘Paul is already radical.’ (i.e. nicht-gemäßigt)

Moreover, such an analysis is incapable of explicating the dual relationship between *noch* and *schon* in such sentences. The analysis proposed in Löbner (1989), by contrast, avoids these difficulties. Löbner regards the use of *noch* and *schon* in (54) as completely parallel to that discussed in 7.1. The only difference is that a scale of radicalism replaces the time axis and the arguments of the scalar predicates play the role of reference time in examples like (5)–(6). If we use ‘a’ as an abbreviation for the arguments in (54) and ‘p’ for the scalar predicates *ist gemäßigt/radikal,* the meaning of *noch* and *schon* can be analysed analogously to (17):

(57) a. $\text{noch}(a,p) = -\exists x(\text{LESP}(a,p) \leq x < a \,\&\, \neg p(x))$
b. $\text{schon}(a,p) = \exists x(\text{LESP}(a, \neg p) < x \leq a \,\&\, p(x))$

The following diagram illustrates the conditions under which (54)a.–b. would be both true and appropriate according to (57):

(58)



The English counterparts of *noch* and *schon, still* and *already,* are rarely used in non-temporal contexts. The following examples show, however, that such usage does occur:

(59) a. When I am out in the country, the sound of an owl is (already) enough to keep me awake all night.
b. Call a man or a woman right- or left-wing, extremist or moderate, and you have already stripped him or her of a particle of that uniqueness…(*New Statesman,* 21 December 1979, p. 998)
c. This means that Chapel Cross has no site inspector to check the safety implications…Instead, an inspector from a similar reactor at Calder Hall in Cumbria is trying to cover both jobs at once from London, even though checking Calder Hall…is already a full-time job. (*New Statesman,* 7 December 1979, p. 88)

If *still* is used in a parallel fashion, it tends to receive a concessive interpretation:

(60) a. This is still a misdemeanour.
b. This is already a felony.

If *schon* is a somewhat marginal instance of a focus particle in sentences like (54) b., this expression exhibits all the syntactic characteristics of a genuine focus particle in sentences like the following:

(61) a. Schon das Wort war ihm verhaßt.
'He hated even the word.'
b. Schon 1862 wurde deutlich, daß die Südstaaten nicht würden gewinnen können.
'As early as 1862 it became obvious that the Confederate States would not be able to win.'

Schon occurs with another constituent in the forefield, which can be regarded as its focus on both phonological and semantic grounds. *Noch* can be used in a parallel fashion (cf. (1)), but *erst* rather than *noch* is the dual of *schon* in contexts like (62):

(62) Nicht schon 1862 sondern erst 1863…
'Not as early as 1862 but as late as 1863…'

Schon contrasts with *erst* in both of the two contexts distinguished in Chapter 5 on the basis of the direction of the scale determined by both context and particle. As pointed out in that chapter, the scale associated with *schon* and *erst* in (63) is reversed in contexts like (64):

(63) a. Ich habe schon zehn Seiten geschrieben.
'I have already written ten pages.'
b. Ich habe erst zehn Seiten geschrieben.
'I have only written ten pages so far.'

(64) a. Schon fünf Seiten genügen für diesen Zweck.
'As few as five pages are sufficient for this purpose.'
b. Erst fünf Seiten genügen für diesen Zweck.
'Only five pages will do for this purpose.'

Apparently, *erst* replaces *noch* as dual of *schon* whenever there are more than two contrasting phases (cf. Löbner, 1989). In (65)a., *noch* is used because 'cold' is simply opposed to 'warm'. In (65)b., by contrast, *erst* replaces *noch* in the answer, since several temperatures are under consideration:

(65) a. Ist das Wasser schon warm?—Nein, es ist noch kalt.
'Is the water warm yet?'—'No, it is still cold.'
b. Ist das Wasser schon warm?—Nein, es ist erst lauwarm.
'Is the water warm yet?'—'No, it is only lukewarm.'

An adequate semantic analysis of the focus particle *schon* in sentences like (61)–(65) has to meet two criteria of adequacy: first it has to account for the fact that *erst* is the dual of a focusing *schon;* secondly it has to account for the fact that the scales associated with *schon* and *erst* in contexts of type (63) are reversed in contexts of type (64) or (61). The analysis offered in Löbner (1989) comes very close to meeting these requirements. According to Löbner, it is again the general format of phase quantification that is relevant for the analysis of focusing *schon* and *erst*. The two context types that determine two different directions of ordering are seen as manifestations of two different perspectives. In sentences like (61)b. or (62), the location of an event or state on the time axis is at issue and the particles in such sentences raise the question of how this event or state is located with respect to a transition between two phases on the time axis. Sentences like (61) or (64) involve other than temporal scales but have to be treated analogously. In examples like (63), by contrast, the starting-point is a reference time and the question arises what state in a development has been reached at this point. The truth conditions and presuppositions formulated by Löbner for the focus particles *erst* and *schon* in such sentences have the same general format as those formulated for the aspectual operators *noch* and *schon*.[13]

The use of *schon* as a genuine focus particle has a parallel in many other languages, as the following examples show (cf. Välikangas, 1982):

(66) a. (Finn.) *jo lapsena* 'even as a child'; *jo tästä syystä* 'for this reason alone'; *jo vuonna 1920* 'as early as 1920'
b. (Fr.) Trois ans déjà se sont écoulés.
'Three years have already elapsed.'
c. (D.) *Al in 1066* 'as early as 1066'

In English, *already* can be used in a similar function in connection with temporal frame adverbials. In examples like the following, *already* has the evaluative implications that are typical of focus particles. Evaluative comparatives like *as early as, as long ago as* are more common in this function, however:

(67) a. Already, in fact, by 1931 Cabinet Government in Bagehot's sense of the word had become an anachronism.
b. Already this year, interviews by Walters with Fidel Castro and Assad have been events of major political importance.

8
Historical aspects

8.1.
ETYMOLOGY AND HISTORICAL DEVELOPMENT

In the preceding chapters I have already used historical information from time to time, in order to support certain analyses and in order to show how lexical distinctions drawn in one language are related to those drawn in another. In this chapter the historical aspects of this study will be pursued more systematically. We will take a closer look at the etymology of focus particles, at the processes that lead from more concrete meanings to the abstract meanings described above and at some additional developments that affect some focus particles, some conjunctions and some adverbs and result in a use of the relevant expressions often described with such labels as 'modal particles' or 'discourse particles'. Imposing such a historical perspective on our field of study will enable us not only to pursue some questions that are of interest to historical linguists—such as the question 'Are there some generalisations to be drawn in the development of focus particles from other lexical classes?'—but also to throw some additional light on the meaning and use of focus particles today and on certain current developments. The material basis for this historical chapter is provided by the information available on the use of focus particles in various periods of English, German and other European languages. In addition, we will use synchronic variation within a language ('polysemy', range of uses) as well as the synchronic comparison of genetically unrelated languages as a basis for plausible internal reconstructions of certain historical developments.

8.1.1.
Notional domains and subclasses of focus particles

In discussing the origin and historical developments of focus particles, I will investigate the subclasses distinguished in the preceding chapters separately. Given our current state of knowledge in historical semantics, it is out of the question to make predictive statements or formulate constraints in this field. But

what we know about the development of certain minor lexical classes or functional categories such as articles, relative pronouns or conjunctions, justifies the hope that it is possible to formulate some general tendencies for other members of minor word classes as well. Of course, it is never possible in analysing grammaticalisation and semantic change to establish exactly one source for one target. There are always several sources for one target and one and the same source may lead to several targets. The following discussion will show, however, that it is possible to identify some general affinities and lines of development in the history of focus particles, both in the languages where historical information is available and in the languages which do not allow us to follow their historical development through several centuries.

Additive particles

Focus particles expressing simple addition or inclusion like E. *also, too, as well* exhibit a clear affinity to the notions 'identity', 'equality' and 'increase'. More often than not, the relevant identity is one of manner and/or degree. Thus the adverb *so* and its counterparts in other languages, which can be assumed to have expressed manner or degree deixis as part of their earlier meaning (cf. König and Kortmann, 1987), appear as components in many additive particles. Members of another group of additive particles either derive from verbs denoting 'increase' or 'addition' or from expressions containing the coordinating conjunction *and* as a component.

(1) a. 'identity, equality (of manner, degree)': E. *as well* (<OE *eall swa□ wel* 'entirely so well'), *also, likewise, similarly,* G. *ebenfalls, gleichfalls, ebenso;* Fr. *également, de même, pareillement, aussi;* Swed. *även, också;* Sp. *también, asimismo;* Russ. *takže, tože;* It. *altresí;* Jap. *saye* (*sa* 'so, thus'); Icel. *jafnvel* ('equally good'); Lat. *quoque;* Port, *do mesmo modo;* Vietn. *cûng* ('also, the same'); Pahlavi *hamedon* ('also, thus'); Gaelic *mar an ceudna* ('in the same manner').

b. 'increase, addition': OE *e□ac* (cf. *e□acnian* 'increase'); Goth. *auk* (cf. Lat. *augere* 'increase'); E. *too* (<OE *to□* 'in addition'); Lat. *etiam;* Russ. *i;* Hung, *is* (cf. *ès* 'and'); Fr. *non…plus;* Sp. *además*; Latv. *ari* 'with, also, in addition'; Skt. *api* 'and add to this'; Alban. *edhé;*

Gk. *kaí;* Jap. *mo;* Zulu *na*; Malayalam *-um; Gungu* Yimidhirr *galmba* (cf. *galmbaa-galmbaa* 'pile on top of one another'); Manam *-be;* etc.

The affinity between E. *so* as well as its counterparts in other languages and additive focus particles requires some further comments. English *so* and its cognates in other European languages can be assumed to have had a deictic use

as an adverb of manner or degree among its primary uses. This basic deictic use can still be found in German, Swedish and many other European languages:

(2) a. So macht man das.
'That's the way to do it.'
b. So groß war der Fisch.
'The fish was this/so big.'

In Modern English, the deictic use of *so* is rare in reference to manner. If such a deictic use is possible at all, it requires reinforcement by *just (just so)* or, in certain British dialects, by *like (like so)*. In Swedish, too, *så* is typically reinforced by *här* (*så här* 'so here'). Like all deictic expressions, *so* and its cognates later developed an anaphoric use and this use can be assumed to underlie the development of additive focus particles. What focus particles deriving from this source basically do is thus to express identity of manner with some value given in the context. The components that we find in (1)b. in addition to 'so' can be regarded as reinforcing elements.

Scalar additive particles

Additive particles which invariably induce an ordering, i.e. scalar particles, may also derive from the notional domains identified above. In fact, it is not always clear whether an additive particle should be analysed as belonging to the 'scalar' or the the 'non-scalar' subclass. In Swedish, for example, *till och med* is clearly a scalar particle corresponding to E. *even* but *även* may correspond to either *also* or *even* in English. Many genuinely scalar particles, however, exhibit specific affinities, which suggest that they derive from other sources than non-scalar additive ones. Particles like Spanish *incluso,* Fr. *jusqu'à* ('until, up to') or Swed. *till och med* ('to and with') directly express an ordering and the inclusion of an extreme value as part of their earlier meaning:

(3) Il y a des noms et jusqu'à des personnes que j'ai complètement oubliés.
'There are names and even persons that I have completely forgotten.'

An equally general phenomenon is the fact that scalar additive particles often take the same form as the so-called emphatic reflexive 'pronouns' or 'intensifies'. And, finally, metalinguistic expressions like *true* often develop a use as scalar particle:

(4) a. 'inclusion': Sp. *incluso, hasta;* Swed. *till och med;* G. *sogar;* Fr. *jusqu'à;* It. *perfino;* Arab, *hatta* ('until, as far as, up to, even'); E. *so much as;* Rom. *pîna si* ('until, even'); Eston. *no koguni* ('and completely'); Lat. *adeo;* Hung, *még* ('more, even'), *peale* ('more

than, above'); Czech *dokonce* ('(up) to the end'); Mandarin *lian* ('even, including'); etc.

b. 'emphatic reflexives': Fr. même; G. *selbst;* Norw. *selv;* D.*zelfs;* Lat. *ipse;* It. *stesso* (<Lat. *iste ipse);* Irish *feín;* Sorbian samo; Latvian *pat* (cf. *pats* '-self, personally'); Pali *saman;* Port, *mesmo*.

c. metalinguistic terms ('true, clearly'): Fr.*voire* (<Lat. *vero);* G. *ja sogar;* Russ. *daže*[1]; Rom. *chiar* (<Lat. *clarum* 'clear'); Turk, *bile* 'intentionally, knowingly, even' (gerund of *bilmek* 'know'); Icel. *meira aþ segja* ('to say more').

Exclusive (restrictive) particles

Exclusive particles typically derive from the numeral 'one', from privative notions[2] and from negative constructions of the type 'nothing except'. The following examples provide ample illustration for these recurrent themes in the etymology of restrictive and exclusive particles.[3]

(5) a. numeral 'one' (<IE **oi*, **sem*): E. *only, alone* (<OE *an(e),* þæt *an, for an*), *simply;* G. *einzig, allein, erst;* D. *alleen*; It. *unicamente*; Fin. *yksin* (cf. *yksi* 'one'); Latvian *viens, viena* 'only, one'; Yoruba *kàn* 'only' (cf. *kan* 'one'); Yapese *taqaa* (*taqaab* 'one'); Turk, *bir;* Kalkatunga *ajarna* (*ajar* 'one').

b. privative notions: E. *merely* (<Lat. *merus* 'unmixed'), *purely;* G. *bloß, ausschließlich, lediglich;* MHG *echt* (<OHG *eckerodo* 'poor, deficient'); Swed. *blott, bara* (cf. E. *bare, barely*); D. *slechts* 'simply, only' (cf. G. *schlicht*);

It./Sp. *puramente;* Maori *kan* 'only, bare, in vain'; Hawaiian *wale* 'alone, only, without payment/cause'; etc.

c. restricted negation ('nothing except'): Fr. *ne…que;* It. *non…che;* Sp. *no… sino;* E. *(nothing) but, not… until/for;* G. *nur;* D. *maar;*[4] Lat. *nihil aliud nisi;* Jap. *sika* …Neg.; etc.

The fact that the numeral 'one' provides a common source for the development of exclusive focus particles makes it plausible that the evaluative component described above may be a part of the meaning of such particles. 'One' is the lowest of all natural numbers.

The examples listed in (5)b. not only reveal an affinity of exclusive particles to the notion of deprivation but also reveal a close tie-up between focus particles of this subclass and the adverbs called 'downtoners' in Quirk *et al.* (1985:601ff.), i.e. expressions like *barely, scarcely, just*. It is frequently the case that the same expression functions both as an exclusive focus particle and as a downtoner. *Pas* in Dutch ('not…until, hardly') is a case in point. Furthermore, there is a clear

historical tie-up between the two groups. The same root may develop into an exclusive particle in one language and into a downtoner in another (e.g. Swed. *bara* 'only', E. *barely*).[5] It is particularly in their 'retrospective' use that exclusive particles are difficult to keep apart from downtoners. Dominicy (1983) gives a variety of examples that demonstrate this:

(6) (G.) Ich bin erst (vor kurzem) angekommen.
(E.) I have only just/barely arrived.
(Lat.) Modo adveni.
(D.) Ik ben pas aangekomen.
(Ital.) Sono appena arrivato.

Very few, if any, semantic changes have to be postulated in order to link the focus particles listed in (5)c. to the original meaning of the negative constructions with exception markers. The exclusive component was there right from the start. It is presumably the maxim of Relevance that is responsible for the fact that such constructions may become associated with an evaluation as 'minimal'. Exceptions are normally a minority among the values under consideration.

The English examples included in (5)c. require a few comments. The path leading from an original meaning 'exception' or 'lying outside' to that of an exclusive, evaluative particle ('He is but a child') in the case of E. *but* has been retraced in great detail by A.Joly (1980). Originally derived from OE *butan* 'outside', *but* developed into an exception marker in connection with quantifiers and is still used in this function in Modern English:

(7) a. Nobody but you…
b. He all but did it…
c. It never rains but it pours.
d. He drinks any thing but gin.

The use of *but* as an exclusive focus particle is based on the use of this expression as an exception marker and the result of omitting the negation:

(8) a. He nis but a child.
b. He is but a child.

In Early Modern English, *but* was used quite frequently in this function. In fact, *but* was more frequent than *only* in fictional prose, in comedies, sermons and letters (cf. Nevalainen, 1985):

(9) a. But when 'tis said The Matter of War with France is but a Colour'…
b. A. I knocke your costarde if ye offer to strike me.

B. Strikest thou in deede? and I offer but in iest? (cf. Nevalainen, 1985)

In Modern English, *but* has a literary flavour in such contexts.

The tentative inclusion of *not…until* and *not…for* in the list of focus particles deriving from negative constructions with exception markers also requires a few comments, because so far no reason has been presented for the view that these expressions can really be considered as discontinuous focus particles just like *ne…que* in French. On the basis of the meaning that *until* has in affirmative and negative sentences like (10), it seems plausible to assume that the adverbial introduced by this preposition or conjunction originally took wide scope over a negation in negative sentences (cf. Mittwoch, 1977):

(10) a. He will be in London until Friday.
b. Until now he has not said any thing.
c. Don't touch anything until the police are here.
(11) (not A) until B

In sentences such as (10), *until* simply implies that a state prevails (or should prevail) up to and including the point-in-time given. Contrary to what is claimed in Mittwoch (1977), however, the analysis given in (11) cannot explain all uses of *not…until* in Modern English. The arguments presented in Karttunen (1974) to show that some uses of *until* in negative sentences can only be explained if a bracketing like (12)a. is postulated are still valid:

(12) a. not (A until B)
b. The princess did not wake up until 9 o'clock.

In sentences like (12)b., *until* is a negative polarity item and means the same as *before,* except for the additional presupposition that there was a change at B, i.e. 'A when/at B'. The reason why *not…until* can be analysed as being at least on the way towards developing into a discontinuous focus particle is that the collocation *not until B* is treated like a constituent in cleft sentences and in topicalisations and the same applies to the expression *not for B:*

(13) a. It was not until I wanted to pay that I realised that I had forgotten my wallet.
b. Not until I wanted to pay did I realise that I had forgotten my wallet.
(14) That night she was strained, but she had a good night and it was not for several days that she broke down again. (C.P.Snow, *Homecomings,* p. 61)

The preceding discussion has shown that it is possible to establish a clear correlation between focus particles as targets of semantic change and certain sources. Even though there are several sources for each subclass of particles and although each source may also lead to targets other than focus particles—semantic change is never necessary but only possible—the data listed in the preceding section give support to the assumption that semantic change is far from being arbitrary, random and reversible.

This view of the historical development of focus particles is somewhat called into question, however, by cases where the same source developed into different, and in fact semantically incompatible targets. This happened in the case of Serbo-Croatian *samo* 'only' and Sorbian *samo* 'even' as well as in the case of It. *pure* 'also, too, even' and E. *purely* or Fr. *purement*. As pointed out above, emphatic reflexive markers typically develop a use as scalar additive particle. *Selbst* in German, *zelfs* in Dutch and *même* in French are cases in point. Thus we would also expect *samo* in Serbo-Croatian to function in this way, since it is a cognate of the emphatic reflexive *samy* in Russian and other Slavic languages. A related form, *sam,* is indeed used as an emphatic reflexive; the adverb *samo,* however, is a restrictive particle, equivalent to 'only' in English. A similar puzzle is provided by the development of It. *pure*. Privative notions generally give rise to restrictive particles. *Pure,* however, is generally used in the sense of 'also, too' in Modern Italian, as well as in the sense of 'although, even if', which clearly derives from the additive use.

(15) (It.) Ci saremo pure noi.
'We'll be here, too.'

In older forms of Italian, *pure* was also used in the sense of 'only, alone', but this use is clearly archaic today.

Such developments from the same source to opposite targets are less of a puzzle if they are considered in the light of certain synchronic facts, facts discussed above in connection with the iteration of focus particles like G. *schon allein* ('already/even alone') or *auch nur* ('even only') and the various use of *selbst,* as an emphatic reflexive marker and as a focus particle. Recall that there are contexts in which focus particles of very different meaning lead to the same overall meaning of a sentence, if they select the same focus, but take different scope. Sentences expressing sufficient conditions provide the clearest instance of such a context. Thus the following pairs of sentences are more or less equivalent:

(16) a. Schon dieses Medikament reicht aus.
'(Even) this medication is sufficient.'
b. Dieses Medikament allein reicht aus.
'This medication alone is sufficient.'

(17) a. Das Medikament selbst reicht aus.
'The medication itself is sufficient.'

b. Selbst das Medikament reicht aus.
'Even the medication is sufficient.'

(18) a. If you drink only a DROP OF ALCOHOL, your boss will fire you.
b. Even if you drink a DROP OF ALCOHOL, your boss will fire you.

In each of these three pairs of sentences, two non-synonymous focus particles are associated with the same focus, but with a different scope. The overall contribution made to the meaning of the relevant sentence, however, is more or less the same in the three cases, as can easily be verified on the basis of the analyses given in previous chapters. It is precisely in such contexts that iteration of basically incompatible particles is possible. And it is precisely such contexts that can be assumed to favour two possible semantic developments of the same source. The meaning of such sentences can be derived from two different analyses and compositional processes and this fact can plausibly be assumed to have triggered, or at least contributed to, the divergent developments of one and the same source.

8.1.2. Grammaticalisation

The development of focus particles from more concrete notions and, typically, also from members of major word classes can be regarded, to a certain extent at least, as an instance of grammaticalisation, i.e. of that pervasive process that leads from a less to a more grammatical unit. To a large extent, the criteria formulated for grammaticalisation by C.Lehmann (1982:121ff.) and others (phonological attrition, semantic bleaching, integration into a paradigm, increase in cohesion and loss of paradigmatic and syntagmatic variability) also apply to the development of focus particles. Like members of other minor lexical categories, focus particles typically derive from expressions originally belonging to major lexical categories. *Auch* and *ausgerechnet* in German, *bile* in Turkish, *let alone* in English and *incluso* in Spanish derive from verbs, E. *even, as well* and G. *gerade, eben, lediglich, bloß* derive from adjectives, D. *pas,* G. *einmal* or Norw. *til og med* derive from nouns. But numerals ('one'), adverbs ('so') and conjunctions have also been shown to function as sources in such developments.

Since focus particles may carry the nuclear tone under certain conditions in many languages, phonological attrition is not a typical feature of their historical development. It is observable in the history of G. *nur, mal* and D. *maar,* but does not seem to play an essential role. Bleaching, by contrast, is a typical concomitant feature of the development of particles. *Even,* for example, lost its spatial meaning, *lediglich* (<'free of, deprived of) as well as *bloß* (<'naked') lost their privative meaning and G. *schon* or Yiddish *shoyn* lost the evaluative component, which differentiates 'beautiful' from 'accomplished'. Or, to mention one more

example, many additive particles (E. *also,* G. *ebenso,* Sp. *también,* etc.) lost the 'manner' component that used to be part of their meaning. If an element is weakened in its phonological and/or semantic substance as a result of grammaticalisation, its decay may be checked by reinforcement (cf. Lehmann, 1982:23ff.). Clear examples of this process in our field of discussion are provided by Ital. *soltanto* 'only' (<Lat. *solum+tantum*) and Fr. *déjà* (<*des +ja*<Lat. *iam*).

Since focus particles constitute a system of a limited number of choices in a language, further subdivisible perhaps into a few subsystems, it is arguable that in the development of such expressions we also find an integration of the relevant expressions into a closed class and perhaps a kind of paradigm. An increase in syntagmatic cohesion is most obvious in those cases where focus particles function as affixes or clitics. It is also observable in the tendency to place focus particles into a position adjacent to their focus. This parameter of grammaticalisation is also in evidence in the derivation of focus particles from certain constructions. *Nicht einmal* in German has become an inseparable unit and thus a complex particle. *Ne…que* in French and *non…che* in Italian are best analysed as discontinuous particles and such an analysis also looks quite plausible in the case of E. *not…until,* as pointed out above. A loss of paradigmatic and syntagmatic variability is not clearly observable in the historical development of focus particles.

The semantic development of focus particles can partly be described in terms of desemanticisation or bleaching: additive particles develop as a result of the loss of a 'manner' feature in expressions like *likewise, similarly, as well* and restrictive particles develop from expressions that lose their earlier meaning of 'deprivation' and/or 'purity'. The reverse process of interpretative augmentation or enrichment, however, also seems to play an important role. As demonstrated in some detail in Chapter 6 and in Traugott and König (forthcoming), certain aspects of the meaning of focus particles can be analysed as the result of the conventionalising of originally conversational implicatures. Something that started out as an aspect of utterance meaning due to conversational maxims à la Grice and as a result of typical uses of the relevant expressions later developed into an aspect of the conventional meaning of the particle in question. In the final analysis, such semantic developments can be regarded as one special instance of a very general type of semantic change, viz. metonymic changes (cf. Traugott and König, forthcoming).

Examples of such interpretative augmentations which result in semantic changes are discussed in Chapter 6. The development of markers of referential identity to scalar focus particles can be assumed to be an instance of such a development. The historical evidence available for English *even* and the current use of expressions like *eben* and *gerade* in German make such an assumption highly plausible. The development of metalinguistic expressions like 'truly, verily' to scalar particles can be explained along similar lines. If such an expression is combined with a structured proposition, i.e. a proposition analysed

into background and focus, the focus value will necessarily be presented as a remarkable value for the relevant prepositional schema. From here it is only a small step to the meaning of a scalar particle like E. *even*. Examples of such semantic changes through the conventionalising of originally conversational implicatures are also provided by the development of restrictive particles. If numerals like 'one' do not express upper bounds ('no more than') as part of their semantic value, but get this interpretation as a result of a generalised quantity implicature, as is often claimed (cf. Horn, 1985a; 1985b; Levinson, 1983), then this implicature can be assumed to have developed into a conventional part of the meaning of *only, alone* and similar particles.

8.2.
MODAL PARTICLES

8.2.1.
Problems and previous analyses

In the following, final, section of this chapter focus particles will be opposed to, and delimited from, another group or 'use' of functional categories, recognised as a special class in many recent descriptions of German and other European languages. A number of expressions listed among the focus particles of German above (e.g. *auch, schon, nur, bloß, erst, eben*) also have a use as modal particle and similar observations have been made for other languages. A confrontation between these two classes or 'functions' will therefore throw additional light on the specific properties of focus particles by showing how far they do or do not share semantic properties with other functional categories.

In addition to German, modal particles have been identified as a special group of function words in recent analyses or grammars of Dutch (e.g. *dann, eens, toch, maar, wel, even*), Scandinavian (e.g. Norw. *vel, jo, nå, visst*), Finnish (e.g. *nyt, jo, silä, muka, kai, -han, -pa, -kin, -kaan*) and Slavic (e.g. Russian *da, nu, že, ved', vot, -to, -ka*), but there does not seem to be an equivalent group of expressions in the Romance languages or English.[6] Abraham (Abraham, 1988) concludes from such comparative observations that modal particles can only be found in languages that are non-configurational or whose word order is organised in terms of a middle field (nexus field) and a forefield. Given the present state of our knowledge, it is far from clear, however, whether such a correlation really holds.

In the relevant descriptions of German, twenty expressions or so are usually assigned to the class of modal particles:

(19) *aber, auch, bloß, denn, doch, eigentlich, eben, etwa, einfach, erst, halt, ja, nun (mal), mal, nur, schon, vielleicht, ruhig, wohl…*

As is shown by this list, the class of modal particles overlaps with other, well-established classes of function words: viz. with the class of adverbs and adjectives *(etwa, doch, vielleicht, wohl, einfach, ruhig, mal, nun (mal), halt, eben);* with the class of focus particles *(erst, auch, schon, nur, bloß);* with the class of conjunctions *(aber, denn);* and with the class of answering particles *(ja)*. In fact, multiple class-membership is often regarded as a characteristic property of those expressions that can be used as modal particles. Such overlap is to be expected if modal particles are the endpoint of a process of grammaticalisation that is fed by several classes of function words.[7]

More often than not, the criteria given for singling out such a class of modal particles are purely negative ones (cf. Weydt, 1969; Hentschel and Weydt, 1989):

(20) modal particles:
a) do not occur in the forefield
b) cannot be the focus of a WH-interrogative, a negation, etc.
c) do not contribute anything to the propositional content of a sentence
d) cannot be stressed
e) cannot be coordinated, etc.

To this purely negative characterisation a few positive statements are sometimes added: (f) modal particles occur exclusively in the so-called 'middle field', i.e in the position between the complementiser or the finite verb and the non-finite verb-forms, (g) they follow all pronominal elements, but may occur at all major constituent breaks within this middle field, (h) they manifest selectional restriction with the mood of a sentence and (i) they partition the sentence into a thematic and a rhematic part without being a part of either.

The last thirty years or so have seen the publication of a large number of mainly descriptive articles and books on modal particles in German (cf. Weydt and Ehlers, 1987). But although many of these articles and books have contributed to identifying the crucial issues, problems and questions in the analysis of this subclass of function words, relatively little progress has been achieved in answering these questions and solving these problems. This state of affairs is partly due to the recalcitrant nature of the meaning of modal particles: they are highly abstract, versatile and context-dependent in their interpretation and it seems extremely difficult to find the appropriate metalanguage for their analysis. The unsatisfactory state of our knowledge about such function words seems also to be a consequence, however, of some frequent and pervasive shortcomings in the analyses available to date.

(i) Aspects of the meaning of a particular context in which a particle occurs are often taken for the meaning of the particle itself. Given the extreme context-dependence of these expressions it is all too easy to fall victim to such an error.

(ii) The search for a *Gesamtbedeutung* is often too quickly abandoned in favour of postulating polysemy. In arguing for a minimalist approach to the

semantic analysis of modal particles, I am not advocating, of course, a dogmatic 'one form—one function' view. The search for one basic meaning may become a matter of diminishing returns, i.e. this 'basic meaning' may be so abstract and unspecific as to be devoid of any practical value. What I am advocating is the maintaining of a minimalist position as long as possible.

(iii) Analyses of modal particles are often unnecessarily complex in the meanings and uses they distinguish, as a result of failing to capture certain generalisations in the semantic development and use of function words. All particles that indicate affirmation as part of their meaning (*schon,* ja, *wohl*), for instance, may have a kind of concessive use in multiple paired foci constructions like the following:

(21) Das nötige Geld hätte ich ja/schon/wohl, aber mir fehlt die Zeit.
'I would have the money all right, what I lack is the time.'

But this fact is just one manifestation of the general tie-up between emphatic affirmation and concessivity discussed in König (1988). Or, to give another example, epistemic expressions of certainty frequently develop and extend their use in the area of tentativeness and hypothetical meaning. Examples of such a development are *sicker, sicherlich, bestimmt, wohl* in German, *zeker* in Dutch, *surely* and *no doubt* in English and *sans doute* in French. These are only two examples of general tendencies observable across the whole lexicon.

(iv) Very frequently, an analysis of the meaning and use of particles is not based on any theory of meaning, comprehension or information-processing, in which the analysis of particles finds its place and can be related to other aspects of meaning.

There are two theoretically oriented studies of modal particles, which are more or less free of these shortcomings and therefore deserve special mention: Jacobs (1984, 1990) and Doherty (1987). In Jacobs (1984, 1990) modal particles are analysed as illocutionary specifiers. Jacobs assumes that these particles interact with the illocutionary type X of a sentence, as determined by the mood and intonation, in such a way that we get a more specific illocutionary force X′. These modifications and specifications are described by Jacobs in the form of meaning postulates, which are intended to account for the fact that an imperative with *ja* is used as a reminder, or that interrogatives with *denn* tend to be used as genuine questions and never as directives or as an act of criticising or reproaching. A number of facts such as the selectional restrictions between modal particles and syntactic mood, the dependence of the interpretation of these expressions on mood or the fact that modal particles occur primarily in main clauses and are thus counted among the 'main-clause phenomena' find a natural explanation in that theory. But its basic tenet, namely that modal particles modify the illocutionary type as determined by the mood and intonation of a sentence so that a more specific force or constraints on possible forces are derived, does not seem to be compatible with the facts. Illocutionary force is the result of an

interaction of many aspects of sentence meaning as well as contextual factors. It is, therefore, not surprising that modal particles should have some effect on the force of an utterance, but this effect does not seem to be their central function. Sentences with modal particles are compatible with a wide variety of illocutionary forces and there are good arguments to show that their basic function is to be seen elsewhere.

The most detailed and comprehensive formal analysis of the interaction between modal particles and other aspects of sentence meaning such as mood, sentence adverbs and intonation is given in Doherty (1987). According to Doherty, the basic semantic function of modal particles is to express attitudes, more specifically, epistemic attitudes (as opposed to emotional and intentional attitudes) of the speaker or hearer. Together with mood, sentence adverbs and negation, modal particles 'contribute to the expression of attitudes concerning the existence and non-existence of the state of affairs identified by other elements of a sentence' (Doherty, 1987:6). The contribution modal particles may make to the illocutionary force of a sentence is regarded as the outcome of the specific epistemic evaluations expressed by these particles as modified by the linguistic and non-linguistic context. The gist of Doherty's theory is perhaps easiest to give in connection with a few examples. The following three sentences contain the modal particles *ja, denn, doch:*

(22) (Ich lasse dir den Vortritt.) Ich habe ja noch Zeit. '(I'll let you go first.) I have (ja) got plenty of time.'
(23) (A. Ich gehe jetzt.)—B. Bist du denn mit deiner Arbeit fertig? '(A. I am leaving.)—B. Have you (denn) finished your work?'
(24) (A.Morgen arbeite ich wieder.)—B.Aber du hast doch noch hohes Fieber. '(A. Tomorrow I am going back to work.)—B. But you've (doch) still got a very high fever.'

In these and similar sentences, the relevant three particles are analysed by Doherty roughly as follows. Sentences with *ja* relate an explicit evaluation to an implicit one that is attributed to the hearer. *Ja* indicates a positive epistemic evaluation of the proposition expressed by the rest of the sentence (or supports an evaluation expressed by a sentence adverb in the scope of the particle) and furthermore implicates that it is possible for the hearer to already know what the speaker asserts. *Denn* in interrogatives like (23) implies an evaluation that restricts the interrogative to its primary epistemic function, i.e. that of a question, and also implies that the hearer knows the answer to the question. *Doch,* finally, relates a positive epistemic evaluation of the proposition expressed by the rest of the sentence to a possibly opposite evaluation attributed to the hearer. In other words, in making an utterance like (24) the speaker indicates that he assumes that the hearer has got a fever as well as his assumption that the hearer does not share this assumption.

Doherty advocates a strict minimalist approach and tries to subsume a wide variety of uses of each particle investigated under one general meaning. The book is also remarkable for its formal analysis of the interaction between modal particles and other aspects of sentence meaning and for the explanation she offers for the distributional restrictions of these expressions. Unfortunately, Doherty almost totally neglects earlier descriptive work and thus never tests her analyses against the background of the observations made in this work. Moreover, I disagree with her view that it is fruitful or even possible to analyse modal particles without recourse to extra-sentential context and I also disagree with certain aspects of the analyses she gives for individual expressions.

In addition to these analyses of modal particles as illocutionary specifiers and as markers of epistemic evaluations, these expressions have also been analysed as signals of interpersonal relations, expressions that provide clues for the perception of a current situation, as devices used to regulate conversational interactions, as instructions to the hearer to make use of mutual knowledge in a certain way and as expressions that refer to background assumptions. Given that modal particles only play a marginal role in this book and are only interesting in so far as they contrast or share certain properties with focus particles, I cannot do justice to all this previous work and state in each case how far I agree or disagree with the basic assumptions or descriptive statements made in these studies.

My own views on modal particles have been inspired by Blakemore's relevance-theoretic approach to connectives in English (Blakemore, 1987) and partly also by Ducrot's theory of the argumentative potential inherent in the structure of a language and his work on connectives in French (cf. Ducrot, 1983; Anscombre and Ducrot, 1983; Moeschler, 1985).[8]

The basic idea of Sperber and Wilson's (1986) theory of communication and cognition, which provides the foundation of Blakemore's approach, is that people generally aim to bring about the greatest improvement of their overall representation of the world in such a way that they try to balance costs and rewards.[9] Old information or information totally unrelated to already available assumptions would not be relevant. Nor is the hearer only interested in gaining more information; s/he is also interested in obtaining better evidence for existing assumptions. In other words, new information is always processed in the context of existing assumptions. Computing the effect of a newly presented proposition crucially involves inference. That is, the role of contextual assumptions is to combine with the content of a new utterance as premises in an argument that leads to new assumptions. There are three ways in which an inference system may play a role in assessing the impact of a new item of information on an existing representation of the world. First, since an inference system can be used to test for inconsistencies in the propositions submitted to it, it can play a role in the hearer's decision to abandon existing assumptions in favour of incoming information. Secondly, inference rules can be used to assess the extent to which an existing assumption is confirmed, strengthened or justified by a new item of information. Finally, since the propositions that are taken as premises may be

derived from the hearer's existing representation of the world, an inference system may play a role in the derivation of contextual implications as a result of processing new information in the context of old information.

Given that newly presented information will only have contextual effects, i.e. give rise to synthetic contextual implications, if it is brought together with the right existing assumptions out of the hearer's overall representation of the world, a crucial problem for Sperber and Wilson's theory, as indeed for any theory of pragmatics, is the question of how the right context is selected and made accessible in each case. This is exactly the point where, according to Blakemore, connectives, adverbs and particles make an essential contribution to the comprehension process. Blakemore sees the sole function of expressions like *after all, moreover, also, furthermore, so, therefore, you see,* etc. in their capability to guide the interpretation process by specifying certain properties of context and contextual effects. 'Such expressions impose constraints on the context in which the utterance containing them must be interpreted' (Blakemore, 1987:75). In other words, connectives and particles are analysed as metapragmatic instructions to process new information in certain types of context.

A brief look at some of the examples discussed by Blakemore will make the preceding sketch of her ideas a little clearer. Consider the following utterances:

(25) a. Tom is an Englishman; he is, therefore, brave.
b. You will have to invite Bill, too. After all, he is your brother,
c. Susan has bought a tracksuit. Moreover, she had a salad for lunch.

Therefore in (25)a. indicates that the hearer is expected to process the utterance in a context in which the first proposition can be construed as evidence for the second. *After all,* by contrast, introduces a premise that is already known to the hearer. The utterance in (25)b. therefore has to be processed in a context in which the first proposition ('You'll have to invite Bill') follows from the premise introduced by *after all* and an additional premise provided by the context. *Moreover,* just like *furthermore* or a sentence-initial *also,* indicates that another argument or premise is presented for an identical conclusion and the context has to be selected accordingly. In our example (25)c. the conclusion could be 'Susan intends to lose weight'.

This approach to the analysis of connectives and particles bears a certain resemblance to Ducrot's analysis of operators and connectives as developed in his theory of 'l'argumentation dans la langue' (Ducrot, 1983; Anscombre and Ducrot, 1983; Moeschler, 1985). Ducrot and his followers draw a sharp distinction between the information (semantic) content of an expression and its argumentative value. 'Argumentative operators' is the label used for those expressions whose insertion into a sentence changes the argumentative potential of the sentence, i.e. its possible use in an argument. These operators impose constraints on the argumentative potential of a sentence by being associated with

certain argumentative principles or background assumptions called 'topoi' by Ducrot. Again, it is easiest to give the gist of Ducrot's theory by looking at one or two examples. *Mais* 'but' is analysed as a connective that combines two sentences or phrases with opposite argumentative orientation, such that the second proposition carries more argumentative weight and determines the argumentative point (visée argumentative) of the whole utterance. A sentence of the type 'p mais q' thus has to be processed in a context in which 'p' supports some conclusion 'r' and 'q' supports the opposite conclusion 'not-r', this latter conclusion being the main point of the utterance. *Quand même, pourtant* and *finalement* are also analysed as connectives that combine 'arguments antiorientés'. *Même* and *d'ailleurs,* by contrast, combine 'arguments coorientés', i.e. arguments with identical conclusions, *même* indicating greater strength than *d'ailleurs*.

8.2.2
Modal particles as metapragmatic instructions

In the following section I will examine how far the analysis of modal particles as metapragmatic instructions to process a proposition in certain contexts can throw new light on the meaning and use of these expressions; how far it enables us to integrate various observations into a coherent framework; finally, how far it helps us to avoid the shortcomings mentioned above. A few particles will be analysed in detail, others will only be sketched in their basic outlines.

Recall that according to Sperber and Wilson and to Blakemore, there are three tasks which an inference system has to accomplish in assessing the impact of a new item of information: testing for inconsistencies, assessing the strength of existing or new assumptions and deriving new contextual implications. If modal particles are considered in this light, it becomes clear that they relate to all of these three functions of an inference system. Such expressions can be used in order to indicate the degree of strength (evidence, confidence, insistence) with which a statement is made or a directive is uttered, they can be used to identify inconsistencies and they may be used to select the context in which a new utterance is to be processed.[10] Moreover, they often characterise the inferential connections between old assumptions and newly presented ones. As a first step towards an analysis, we can thus classify modal particles in German according to the function they primarily fulfil:

(26) a. identification of inconsistencies: *doch, etwa*
b. indicators of strength: *aber, vielleicht, erst, schon, ja, wohl, eben, nun mal, halt*
c. selection of context: *auch, eben, nun mal, halt, schon, denn, eigentlich, einfach, nur, bloß, wohl*[11]

Doch is primarily used to indicate inconsistencies between a new proposition and already existing assumptions and *etwa* is used to test whether such inconsistencies exist. Since assumptions come with varying degrees of strength, it is useful to have expressions which indicate degrees of strength by pointing to available evidence *(ja, nun mal, eben, halt)* or by indicating that a property exhibits a high degree *(aber, vielleicht, erst)*. The particles in (26)c., by contrast, identify and select certain assumptions as relevant for the processing of a new proposition. Furthermore, they characterise inferential connections between new propositions and existing assumptions by assigning these new propositions a role as premise, conclusion, etc. in an argument. Such a classification, however, is only a first step. The preceding general remarks will, therefore, now be illustrated by a closer look at one particle from each group *(doch, ja, auch)*.

That the particle *doch* is primarily used to identify inconsistencies between a new assumption or move and already existing assumptions is most obvious in declarative sentences used as a response as well as in imperatives:

(27) a. Ruf' ihn doch an.
Call him (doch) up.
'Why don't you give him a call?'

b. (A. Wir könnten heute abend ins Kino gehen)—B. Aber
(A. We could go to see a movie tonight) —B. But
du hast doch einen Termin um acht.
you have got (doch) an appointment at eight (haven't you?).'

In a dialogue like (27)b. the suggestion 'We could go to see a movie' is inconsistent with the fact that the person making it has an appointment at eight that evening. More specifically, *doch* indicates that (27)b. is to be processed in a context such as (28):

(28) If you have an appointment at eight, you cannot go to see a movie the same evening.

The use of *doch* in imperatives like (27)a. can be explained analogously. Such an imperative is only appropriate in a context where the addressee has had the chance to perform the relevant action, but has not done so. By using *doch* the speaker indicates that this 'omission' is inconsistent with contextual assumptions about duties, possibilities, conventions, etc. And, to give one more example, in self-addressed utterances like the following, the inconsistency holds between earlier knowledge and the inability to remember:

(29) Wie hieß er doch gleich wieder?
'What was his name (doch) again?'

So far, this analysis is very similar to standard analyses of *doch,* according to which this particle relates to alternative epistemic evaluations (Doherty) or has an 'adversative' meaning. Cases in which *doch* occurs in a declarative sentence that is used as an initial move rather than as a response, however, present difficulties for such a view and, therefore, the essential point of this use is often seen in the goal of the speaker to create a consensus or agreement:

(30) a. Sie sind doch Paul Meier. Wir haben doch neulich nebeneinander gesessen.
'You are (doch) Paul Meier (aren't you?). We were (doch) sitting next to each other recently (weren't we?).'
b. Sie bleiben doch noch?
'You are staying (doch) a little longer (aren't you?).'

In my opinion, the essential point of this use is again to be seen in the function of identifying inconsistencies. Since the addressee has not made any move or expressed any assumption yet, there cannot be any inconsistency in his behaviour. What happens in such cases is that the speaker spells out the context that is relevant for subsequent moves or utterances, such that the rejection of any of these contextual assumptions will lead to inconsistencies. Thus, (30)a. would be used to make relevant contextual assumptions accessible to the hearer in order to avoid problems later. And the second example could be used by a host as an invitation to a guest to stay a little longer. Other uses of *doch* can be explained along similar lines.[12]

As already mentioned, the preceding analysis is somewhat similar to earlier analyses which characterise *doch* as an 'adversative' expression or as contrasting two epistemic evaluations. All other aspects of the use of *doch* that are frequently mentioned in the literature are not part of the meaning of that expression, but follow from the interaction of the meaning described above with specific contexts and general principles of interaction. Utterances with *doch* often express criticism, for instance, and typically ask for a response, so that they almost have the force of a question. Criticism may indeed be the effect of pointing out inconsistencies in the 'behaviour' of an addressee and since nobody likes such a characterisation of his assumptions, everybody will respond to such an 'accusation'. In cases like (30), background assumptions are spelt out, in order to avoid inconsistencies between the context and an assumption the speaker is about to express. In such cases, *doch* points forwards rather than backwards and the overall effect may be described in terms of creating agreement.

In most descriptive studies, *ja* is analysed as a signal of the speaker's awareness that the hearer knows or may already know what the speaker is telling him:

(31) Schließlich geht es ja uns alle an.
'After all it concerns (ja) all of us.'

Such an analysis, however, is totally inadequate for a very common use of *ja,* namely to call the hearer's attention to something that has just become apparent in a situation:

(32) a. Dein Mantel ist ja ganz schmutzig.
'(Hey) your coat is (ja) all dirty.'
b. Fritz hat ja noch gar nicht bezahlt.
'(Hey) Fred has (ja) not paid yet.'

The first of these two examples would typically be used to point out to somebody something he is not aware of and the second could be used in a situation where the speaker is going through some files and suddenly makes a discovery. To take care of this use, the above description is often modified: *ja* is said to indicate that 'there is the possibility to find out' (Hentschel, 1986:16), or that there is 'agreement' between speaker and hearer (Heringer, 1988:742). Doherty (1987: 102) analyses sentences like (32) as exclamations in which the speaker indicates 'in regard to something he would not have expected that it should nevertheless have been possible for him to know it'. None of these modifications is very convincing, however.

The two uses of *ja* mentioned above, as well as other uses of that expression, can easily be subsumed under a univocal analysis if *ja* is analysed as an evidential marker, i.e. as an indicator of the fact that clear evidence is available for an assertion. The difference between (31) and (32) concerns the nature of the evidence. In (31) *ja* relates to background knowledge, whereas in (32) first-hand evidence is provided through perception. In imperatives like (33) it is again background knowledge that provides the evidence. Imperatives with *ja* are used as reminders.

(33) Ruf' ja deine Mutter an.
'Call (ja) your mother up'
'Don't forget to call your mother.'

Other uses of *ja,* e.g. to introduce a stronger formulation, in combination with *sogar* 'even', or as an expression of assertive mood in multiple paired focus constructions are clearly related to this use as evidential, but will not be considered here.[13]

In contrast to *ja* and *doch,* the modal particle *auch* is compatible with all syntactic moods. In this 'modal' use, *auch* primarily indicates inferential connections between newly presented information and already existing assumptions. More specifically, *auch* is used to characterise the sentence containing the particle as a 'precondition', 'cause' or 'reason' for an assumption that is part of the context:

(34) (A.Sie haben vortreffliche Arbeit geleistet.)—B. Ich

‘(A. You have done a great job.)—B. I
habe auch Tag und Nacht geschuftet.
have (auch) slaved away day and night.’

In the preceding example, the proposition expressed by B.’s utterance is characterised as a precondition of that expressed by A.’s remark. Given that *auch* also occurs in interrogatives, the proposition that is marked as ‘cause’, ‘reason’ or ‘precondition’ must sometimes be derived from such sentences through certain operations. It may simply be the proposition expressed by the declarative counterpart of the interrogative, but it may also be the negative version of that declarative sentence:

(35) a. Hast du auch deine Hausaufgaben gemacht?
‘Have you (auch) done your homework?’
b. (Ich werde nicht an der Konferenz teilnehmen.)
(‘I won’t go to that conference.’)
Was könnte ich auch vortragen?
‘What kind of paper could I (auch) give?’

A sentence like (35)a. could be addressed by a parent to a child on its way to the playground in order to find out whether all duties have been performed. In (35)b. the reason given for the assertion expressed by the first sentence is obviously a negative version of the declarative counterpart of the interrogative sentence.

This approach to the analysis of modal particles, exemplified in some detail in connection with *doch, ja* and *auch* can fruitfully be applied to all members of this group. *Nun mal, eben* and *halt,* for instance, are all markers of the strength of an assumption and can be ordered according to their strength as follows:

(36) halt > eben > nun mal

Moreover, *nun mal* characterises the containing sentence as an evident premise, whereas the other two expressions may function either as premise or as conclusion.[14] *Wohl* is a marker of tentativeness, but also expresses an inferential connection and characterises an utterance as conclusion. *Aber,* to give another example, indicates that a statement is based on perceptual evidence, but is in contrast to possible inferences from the context:

(37) a. Du machst wohl Witze.
‘You must be kidding.’
b. Du bist aber gewachsen.
‘(Boy) have you grown.’

And, to give a final example, *schon* is basically a marker of assertive strength that is used in problematic contexts, in contexts, that is, where the *prima-facie* evidence goes against the assumption expressed by the sentence with *schon*. The argument is based on general experience in such cases as indicated in the following example:

(38) Wir finden das Geld schon. Hier geht nichts verloren.
'(Don't worry) we'll find the money. Nothing has ever got lost here.'

Even though D.Blakemore's analysis of connectives and particles is exclusively based on declarative sentences, her theory can easily be extended to cover interrogative sentences as well. The observations made in Redder (1990) on *denn* and in Kohrt (1988) on *eigentlich,* for instance, can easily be integrated into this framework. Redder analyses the particle *denn* as an expression of discourse deixis that points to a previous move in the interactional history and identifies a problem of comprehension. Moreover, *denn* indicates that the answer to the question expressed by the interrogative sentence containing the particle is intended to provide a reason for the move which the speaker does not understand. In contrast to *denn,* which indicates that the question is relevant in the current context, a question with *eigentlich* is set off from that context and introduces a change of perspective and context.

To analyse all modal particles of German in great detail is clearly beyond the scope of this section. What I wanted to show was that an analysis based on the ideas of Blakemore and Ducrot permits us to integrate many observations of earlier descriptive studies into a coherent framework, to avoid the shortcomings mentioned above and to explicate the highly abstract and intractable meaning of these expressions in such a way that language comparison becomes possible even in that area.

9
Overview and further prospects

In her introduction to a special issue on 'particles' of the *Journal of Pragmatics,* A.Wierzbicka (1986b) rejects various approaches to the analysis of particles (focus particles, modal particles, 'approximatives', etc.) in favour of her own 'semantic primitives' approach. The list of alternative approaches distinguished and rejected includes the 'lexical equivalent' approach (explaining particles in terms of one another), the 'example of use' approach (analysis on the basis of suggestive examples), the 'abstract explanation' approach (analysis in terms of abstract labels), the 'radical pragmatics' approach (parsimonious semantics, use of pragmatic principles to account for certain aspects of the meaning of utterance types), the 'performative' approach (analysis of particles as illocutionary force indicators) and the 'logical' approach (translation of sentences with particles into a formal language and specification of truth conditions). Wierzbicka's own approach aims at capturing the semantic invariant of particles and expressing it in terms of a highly restricted inventory of elementary expressions ('semantic primitives') and simple syntactic constructions. These paraphrases must furthermore be substitutable for all uses of the particle in question *salvo sensu*.

Although I agree with A.Wierzbicka in her rejection of many of the approaches listed above, I strongly disagree with her main conclusions and proposals: the view that a single theoretical framework can be adopted for the analysis of all subclasses of particles that are usually distinguished; and the view that the 'semantic primitives' approach is best suited for capturing the semantic invariant of focus particles, or indeed of all groups of particles. As is shown in Chapter 8 and partly also in Chapters 4 and 5, modal particles and conjunctional adverbs are best analysed within the frameworks developed by D.Blakemore on the basis of Relevance Theory and by O.Ducrot. Many of the puzzling semantic properties of these two groups of expressions fall into place if they are analysed as metapragmatic indicators. And as far as focus particles are concerned, it is one of the main contentions of this book that only an approach that incorporates such distinctions and notions as 'focus', 'scope', 'partial order', 'context-dependent' vs. 'natural order', and 'evaluation' holds any promise of capturing the semantic invariant of these particles, of distinguishing general parameters of semantic analysis from idiosyncratic lexical features and of providing a suitable

framework for cross-linguistic comparison. This 'logical' approach is combined with a 'radically pragmatic' perspective, according to which many aspects of the meaning of utterance types with particles and many aspects of the historical development of particles are due to an interaction of their basic lexical meaning with general pragmatic principles. Data taken from a wide variety of languages strongly support such a 'mixed' semantic-pragmatic account.

On the basis of this framework, mainly developed in Chapter 3, it has been shown that focus particles are by no means a marginal phenomenon in grammatical structure and in the lexicon, but play a significant role in the identification and development of numerous grammatical constructions. Moreover, they interact with a variety of semantic domains, such as concessivity and reflexivity. In order to explain why certain types of concessive constructions are clearly identified through the presence of additive focus particles, it has been shown that the meaning of these constructions can, at least to a large extent, be compositionally derived from the meaning of these particles and that of the conditionals also underlying these constructions. Emphatic reflexives, on the other hand, are shown to be a specific variety of focus particles, analysable in terms of the general parameters developed in Chapter 3. The formal identity between scalar additive particles and emphatic reflexives observable in many European languages finds a natural explanation in this fact.

The general parameters distinguished in the semantic analysis of focus particles provide the basis for differentiating several subclasses of such particles. The most important of these distinctions is the one between restrictive (exclusive) and additive (inclusive) particles, which seems to be drawn in all languages of the world. The asymmetry in the semantic properties of these two groups of particles—members of one group are truth-conditionally vacuous in most contexts, members of the other contribute quantificational force—is shown to have a clear parallel in their syntactic behaviour and in their affinity to specific semantic domains. Among the general theoretical questions which are discussed on the basis of the data and findings of this study, the question concerning the boundary between semantics and pragmatics is the most important one. I have tried to show that focus particles interact with Gricean maxims of conversation and that many aspects of their historical development, as well as many aspects of the contribution they make to the meaning of an utterance, are best explained as being due to general pragmatic principles rather than language-specific conventions. Moreover, focus particles seem to support some recent ideas which challenge the 'received view' on the interaction between semantics and pragmatics by maintaining that pragmatic inferences may play a role in truth-conditional content (cf. Sperber and Wilson, 1986; Levinson, 1988). Both additive and restrictive particles are structure-sensitive operators and add 'quantificational force' to a sentence, i.e. the same general format is required for the analysis of both groups. And, as is pointed out in Chapter 1 in connection with examples like *I am distressed because I have even forgotten my own telephone number,* even focus particles of the additive variety are not always

truth-conditionally vacuous, but may contribute to the specification of a proposition in certain contexts.

A further important feature of the book is the attempt to combine an in-depth analysis of English—and partly also of German—with a cross-linguistic perspective and thus to extend the typological approach to a new area of grammatical and lexical structure. Relevant parameters of typological variation in this area can be seen in the differentiation of lexical subsystems, in different techniques of focus marking and in different ways of identifying the scope of an operator. The comparative sections of the book are also meant to make a contribution to the meagre corpus of literature on typological variation within the lexicon (cf. Talmy, 1985). The historical part supports the view that semantic change, too, exhibits a great deal of regularity. I have shown that general correlations can be established across languages between sources and targets in the development of focus particles and that general principles of language use tend to leave their imprint on the conventional meaning of such words.

There are, of course, many problems raised in the early parts of the book that had to be left unsolved and in many cases only partial answers could be given to some interesting and important questions. Among the questions that are in need of further examination is, first of all, the problem of syntactic analysis. Even though a few specific constraints on the use of focus particles (e.g. preservation of adjacency for case marking, availability of alternatives, etc.) are clear enough, the most basic question had to be left unanswered: can focus particles be analysed as entering into endocentric constructions with members of all major lexical categories and their projections or are they best analysed as combining with verbs and their projections only? Instances of multiple focusing seem to provide a crucial test for deciding this controversy. But then interaction of focus particles with multiple foci seems to be very rare. Questions of this kind are clearly in need of further discussion in connection with more than the two or three languages so far considered. Also in need of further investigation are fundamental semantic problems. What are the advantages and criteria of adequacy for the analysis of focus particles as structure-sensitive operators as opposed to generalised quantifiers (cf. von Stechow, 1988) or cross-categorial operators (cf. Rooth, 1985)? Theoretical questions of this kind need to be discussed in connection with a broad range of data and a variety of languages. Some unresolved questions are simply problems of descriptive detail, such as the analysis of *not even* (wide scope of a univocal *even* or narrow scope of polarity *even*) or the analysis of the conjunctional use of *also* and *only*. Since these questions arise in a wide variety of languages, however, they identify typical forms of interaction between negation and scalar additive particles and natural extensions in the use of focus particles respectively and are thus by no means of marginal significance. Further promising research directions are provided by all those cases where tendencies and correlations are discussed that manifest themselves in a wide variety of languages: the asymmetry in the syntactic positions of additive and restrictive particles; the availability of the former, but

not of the latter, as carriers of sentential stress; the relevance of time-depth in the development of certain extensions of meaning; etc.

The semantic and syntactic analyses of this book are illustrated with examples from a variety of languages. Still, this is no more than a modest beginning for a genuine cross-linguistic study. The book is probably more important as a basis for typological work than for its results in that area. Many observations about focus particles made in descriptive grammars make sense when considered in the framework developed above. That *thoŝ*, and *kà*? in Lahu are used both in the sense of E. 'also' and E. 'even' and translate in post-verbal position as 'even if, even though' (cf. Matisoff, 1973) is by no means surprising. Other observations begin to make sense if considered in the light of certain observations made in this book. That Woleaian *bal* should translate as both 'also' and 'only' (cf. Sohn, 1975) could be connected with the fact that additive and restrictive particles result in an identical overall meaning if they select the same focus but a different scope in certain contexts. And, to give one more example, that *sai* and *kəl* 'only' in Margi translate as 'must, have to' (cf. Hoffman, 1963) in subjunctive and present tense contexts might be connected with the fact that exclusive particles change sufficient conditions into necessary ones. Still other observations are simply puzzling, as for instance the observation made by Abbi (1980) that reduplication in Hindi may express either restriction or exclusion like E. *only* or universal quantification. I hope that the general framework developed in this book will provide a basis on which such language-specific questions can be more fruitfully pursued.

Notes

1
Introduction

1 In addition to the label used in this book, several other labels are frequently used for this subset of adverbs: 'focusing adjuncts' (Quirk *et al.,* 1972), 'focusing adverbs' (Taglicht, 1984), 'scalar particles' (König, 1981), 'intensifies' (Ross and Cooper, 1979), 'focusing subjuncts' (Quirk *et al.,* 1985). The term commonly used in German is 'Gradpartikeln' (Altmann, 1976; 1978).

2 I owe these observations and examples to S.Levinson.

3 In most of the reference grammars I have seen, focus particles and related matters are simply described by providing English glosses. This has the unfortunate consequence that the relevant expressions are described in terms of a 'metalanguage' that has comparatively few distinctions in the relevant area and includes some expressions (e.g. *just*) that are notoriously vague (or polysemous) and thus highly versatile in their interpretation.

4 Such an analysis is only possible, of course, if the antecedent and the consequent do not express a relation of temporal succession, as in the following example (cf. McCawley, 1981:49ff.). These are precisely the contexts, of course, that allow contraposition (cf. (ii)):

(i)	a.	Only if Fred has answered all parts of the question has he solved the problem.
	b.	If Fred has solved the problem, he has answered all parts of the question.
(ii)	a.	The Germans are nothing if not thorough.
	b.	If the Germans are anything (at all), they are thorough.

2
Syntax

1 Cf. Rochemont (1986), Selkirk (1984) and Jacobs (1988) for some recent discussions.
2 From now on, capitals will be used to mark the intended focus of a particle, whenever an argument rests on a specific identification of the focus. In sentences with two particles, I will follow Jacobs (1983) in co-indexing particle and its focus.
3 In English, there is only one cliché coordination (cf. Quirk *et al.* 1985:610):

(i) He is making the suggestion purely and simply for your benefit.

4 Such particles typically follow inflectional suffixes and are peripheral in word structure.
5 The syntax of focus particles in English is probably not all that heterogeneous if the distributional constraints noted in the literature are seen as a result of both syntactic and semantic, and perhaps also phonological, principles. Quirk *et al.* (1985:608) note, for example, that *exactly* commonly focuses on *wh-* items or on quantifiers:

(i) Exactly who is asking for me?
(ii) Exactly ten people came.

Given that the meaning of *exactly* involves the selection of a precise value among a set of possible values, this distributional fact looks very much like being a consequence of the meaning of *exactly*.
6 *Only* is an exception. This particle cannot skip over a preceding auxiliary to focus on the subject (cf. Taglicht, 1984:77). Moreover, as Jackendoff (1972) noted, *even* and *also* are barred from being three auxiliaries away from a focused subject.
7 A node X_1 c-commands a node X_2 if the lowest branching node that dominates X_1 also dominates X_2 (cf. Reinhart, 1983).
8 This is reformulation of Jackendoff s principle given in Ross and Cooper (1979: 391), who reject it for reasons that are not fully convincing.
9 This sentence is, of course, acceptable if the intended focus of *auch* included the whole predicate.

3
The meaning of focus particles

1 The particles *baa* and *ayaa* in Somali are generally described as lexically empty focus markers (cf. Saeed, 1984:21ff.). A similar function is attributed to the clitics -?*a* and -*be* in Manam. The elements focused by the addition of these clitics occupy their normal sentence positions. There is, however, a slight difference in meaning: -?*a* is the more emphatic marker and often has a contrastive or exhaustive listing function, whereas -*be* is weaker and lacks that function (cf. Lichtenberk, 1983: 476ff.).
2 Earlier studies (e.g. Fraser, 1971; Anderson, 1972; Altmann, 1976) use the terms ‘scope’ or ‘range’ to refer to what is called ‘focus’ in this and other more recent analyses. The significance of the parameter ‘scope’, in the sense of the present study, was not seen at all in these earlier analyses. The only recent analysis that follows that early tradition and terminology is Koktova (1987). But since her

analyses are purely syntactic, her arguments for dispensing with the 'focus-scope' distinction are far from convincing.

3 In other words, we have simply inserted *somebody/something other than* in front of the focus expression in the examples discussed so far.

4 It is simply not possible to mark the scope of a particle unambiguously and clearly in surface structure, as Taglicht (1984) tries to do.

5 These translation rules are, of course, more complicated if it is not the whole sentence that is in the scope of the particle. Note that cleft and pseudo-cleft sentences give us a good reflection of the relevant translation rules in surface structure:

(i) What he lost x_i was THE KEYS$_i$
(ii) It was THE KEYS$_i$ that he lost x_i

6 Jacobs (1988:97) points out, for example, that in contrast to the focus of a declarative sentence, the focus of an exclamation is typically old information and c-construable.

7 I will use the verb *entail* whenever I speak of normal semantic consequence relations. The verbs *warrant* or *license,* by contrast, will be used in the sense of 'semantically and/or pragmatically implies', i.e. in those case where it is not clear yet whether a semantic or pragmatic implication is involved.

8 Jacobs (1983:133f.) defines scales as functions from the set of values under consideration into the set of natural numbers. Since this definition covers both graded scales such as {<a,1>, <b,2>, <c,3>} and 'ungraded scales' like {<a,1>, <b, 1>, <c,1>}, it enables him to associate each particle and each use of a particle with a scale.

9 Cf. the summary given in Levinson (1983:133ff.).

10 'Partial' orders are contrary to 'total' orders. The property that distinguishes them is connexity. If for every x and y in a set A, either x precedes y or y precedes x, then the order in question is connex and therefore a total one. Partial orders do not have this property. Total orders can be diagrammed as a single chain, whereas partial orders are represented by branching diagrams.

11 In his discussion of (41)c., Bolinger describes the *faux pas* of a person who felt so warmly towards an invited speaker that he used this sentence in his later thank-you letter, neglecting that it has a very different interpretation if it is read with a focus on *welcome* and fall-rise on *at all:*

(i) You would have been WELCOME if you had said nothing at all.

And he adds that in writing we must insert *even* to signal the intention (Bolinger, 1975:473). What this example shows is that in complex sentences only one out of several identifications of a sentential frame will give us a scalar interpretation for a focused expression. The problem is analogous to the problem of scope assignment to a focus particle in complex sentences or complex constructions. Examples like (41)a. and (41)c. also show that certain lexical specifications of a focused constituent may express the same meaning as focus particles like *even*.

12 In examples like the following, it is not the linear sequence of particles, but the sequence of elements as an indicator of a structural configuration that marks relative scope.

(i) FRED$_1$ read only$_2$ *Syntactic Structures*$_2$, even$_1$

In sentence-final position, particles like *only, also, even* and *too* cannot only focus on any expression in the sentence, but they also take wide scope over a preceding operator.

13 In French, the contrast between wide scope vs. narrow scope in examples like (68) a.–b. is also expressed by lexical means:

(i) a. J'espère que Paul ne sera pas aussi licencié.
'I hope that Paul will not be laid off as well.'

b. J'espère que Paul ne sera pas non plus licencié.
'I hope that Paul will not be laid off either.'

14 One of these tests is the negation test: in contrast to standard entailments, presuppositions are, at least very often, preserved under negation. But whereas Burton-Roberts regards this as the most clearly established test, Seuren and many others maintain that it is unreliable. Another property of presuppositions that is often assumed to provide a further test is the fact that a presupposition of the consequent of a conditional that is mentioned in the antecedent is not a presupposition of the whole conditional.

15 Note that the negation of a sentence with a focused expression, the 'inner negation' in this case, always relates to the focus.

4
Additive particles

1 Here, we use again Jacobs's notation for the representation of contextually relevant alternatives (cf. Jacobs, 1988).

2 Note that a position before its focus is a necessary (and according to Altmann (1976:317f.) also a sufficient) condition for a scalar interpretation of *auch*. Since G. *gleichfalls, ebenfalls* and *ebenso* cannot co-occur with their focus in the forefield, these particles cannot be used in contexts like (8).

3 A similar problem to the one just discussed for G. *auch* arises for E. *too.* According to Goddard (1986:639), *too* expresses a 'cumulative additivity' in contrast to the simple additivity expressed by *and* and *also*. As far as I can see, *too* does not have this meaning in all of its uses, but it clearly has it in appended clauses like the following:

(i) It is described in a note as 'the right to have someone informed when arrested or detained'; without delay too, which all sounds grand. (*The Spectator,* 8 March 1980, p. 13)

4 In their discussion of the relevant expressions in Finnish, Karttunen and Peters (1980) distinguish what are here called 'free-choice' quantifiers from secondary interrogatives like *kukin* 'who', which can only co-occur with another interrogative pronoun in a clause, and from negative existentials like *kukaan* '(not) anyone/any'.

5 Even in those cases where the argumentative values of connectives and operators are analysed as being diametrically opposed to their semantic content, I find the opposition drawn by Anscombre and Ducrot between an argumentative and semantic dimension of language far from convincing. According to their analysis, *presque* (almost) has a negative content (almost p |= ¬ p), but an affirmative argumentative value like p, whereas *à peine* (hardly) has an affirmative semantic content (hardly p |= p), but belongs to a negative argumentative scale just like '¬ p'. There are good reasons, however, for analysing *hardly, barely,* etc. as some kind of negative expression, whereas *almost* and related expressions like *nearly, approximately, practically,* etc. are best analysed as affirmative operators. That 'almost p' typically suggests '¬ p' is a matter of generalised conversational implicatures.

6 The set of negative-polarity contexts in English includes overt negation, interrogatives, conditionals, implicit negations like *refuse, be against,* superlatives, comparatives, emotive predicates like *regret, be surprised,* adverbs like *seldom, rarely,* counter-factual *before* and *too,* quantifiers like *all, at most,* etc. These are the contexts labelled as 'affective' in Klima (1964) and as 'downward-entailing' in Ladusaw (1980). The attempt, made in earlier analyses of negative polarity, to find the common denominator of all relevant operators and contexts in the presence of an overt negation at some level of representation has now been abandoned. This common denominator is now generally seen in a semantic property. Negative-polarity contexts, or rather the expressions creating such contexts and licensing the occurrence of expressions like *ever, any, at all, all that,* etc. can be characterised as inversely monotone (monotone-decreasing) operators, i.e. as operators that reverse the normal entailment relations of affirmative contexts. Whereas the directly monotone operator *at least* licenses an inference with a weakened predicate, the inversely monotone operator *at most* licenses inferences with strengthened predicates (cf. Hoeksema, 1986):

(i) At least two persons were drinking tea →
At least two persons were drinking something.
(ii) At most two persons were drinking something →
At most two persons were drinking tea.

7 The second clause does not really represent Kay's view, who argues that *even* 'takes wide scope over all logical operators in the proposition that constitutes its text-proposition', regardless of its surface position. But this view cannot be maintained, as (25) and other examples to be discussed below clearly show.

8 In utterances with negative polarity and *even,* the alternatives under consideration are often explicitly identified in appended reduced clauses introduced by *let alone, much less, still less, never mind:*

(i) She won't even open his letters, let alone answer them.
(ii) It was abnormal for her to telephone me at all, much less ask me to see her.

A detailed analysis of the syntax and meaning of such expressions is given in Fillmore, Kay and O'Connor (1988): the general format of constructions with *let alone* is given as F(XAY let alone B), with F representing a negative-polarity trigger. The B clause (XBY) represents the context proposition of the clause with *even* (XAY) and the latter entails the former in the scalar model in which the utterance is interpreted. Just like *even, let alone* is seen as interacting with Gricean maxims of conversation. In fact, constructions with *let alone* are regarded as a means of meeting conflicting demands of Relevance and Quantity.

9 In contrast to E. *even* or G. *selbst,* Japanese *mo* may also select a quantifier as focus in affirmative contexts. Martin (1975:68) points out that *mo* has two different English translations when the focus is on a quantifier: when followed by a negative, a number+*mo* translates as *not even,* but *all of, as much as* is the correct translation when an affirmative predication follows:

(i) Iti-zikan mo kakaranai
'It doesn't even take an hour.'
(ii) Iti-zikan mo kakaru
'It takes one whole hour.'

In cases like (ii), the alternatives under consideration are contained in the focus value. As a consequence, the focus particle has a purely evaluative meaning.

10 From P.Highsmith, *A Suspension of Mercy,* Middlesex: Penguin, 1978, p. 6.

11 The situation found in Serbo-Croat where the exclusive particle *samo* 'only' (*samo jedan dan* 'only one day') takes the same form as the intensifier *sam, sama, samo* '-self' is quite exceptional. In view of what was said in previous chapters about the equivalence of additive and exclusive particles in certain contexts, as a result of different composition, it is however not surprising that the same domain should give rise to the development of both additive and exclusive particles:

(i) Sogar $100 genügen, um meine Probleme zu lösen.
'(even) $100 is enough to solve my problems.'
(ii) $100 nur genügen, um meine Probleme zu lösen.
'$100 only is enough to solve my problems.'

Note, furthermore, that non-head-bound intensifies often give the impression of carrying negative implications:

(iii) Der Präsident wird sich selbst um diese Angelegenheit kümmern.
'The President will look into this matter himself.'

12 It is only in such multiple-focus constructions that a head-bound intensifier need not form a constituent with its focus, as is shown by the following German and Swedish examples:

(i) (G.) Selbst wohne ich in Berlin.
(Swed.) Själv bor jag i Berlin.
'I myself live in Berlin.'

5
Exclusive particles

1 Interestingly enough, these 'exception markers' can also be associated with a ranking and an evaluation. *Short of, beyond* and *all but,* for example, characterise the value excluded as an extreme one:

(i) He'll do anything short of murder.

For a recent semantic analysis of exception markers, see Hoeksema (1990).

2 I will only discuss examples with one occurrence of *only*. Examples with two occurrences of an exclusive particle are discussed in Ducrot (1972: 152ff.) and Lerner and Zimmermann (1981).

3 Note that the contrast between 'only if p q' and 'if p, q' is thus only a special instance of a more systematic contrast.

4 This tie-up provides the basis for certain translation strategies recommended in various grammars for constructions with 'only'. Ramstedt (1939:90), for example, recommends translating the Korean particle *ja* 'only' after the *converbum perfecti* as *must: poa-ja algenne* 'Only having seen, I shall know', 'I must see before I know', 'I must see to know'. Note, moreover, that scales in sentences expressing necessary and sufficient conditions interact in such a way that the assertion of a value 'a' as sufficient, implicates that a higher value than 'a' is not necessary, whereas the assertion that 'a is necessary' implicates that a lower value is not sufficient.

5 This equivalence is presumably the reason why some descriptive grammars suggest that both *even* and *only* are possible translations for the same particle in certain languages. According to Durie (1987), for example, *meu(ng)* in Acehnese corresponds to either *only* or *even* in English.

6 According to Altmann (1976:106f.) *einzig* and *allein* never induce a ranking either. The tests used to demonstrate this are not convincing, however. The fact that these two particles do not combine with numerals as focus could be due to their etymology (<*ein* 'one'). As far as I can see, *einzig* and *allein* are all right in some of the scalar contexts discussed above:

(i) Allein/einzig EIN Wunder kann uns noch retten.
'Only a miracle can save us.'

7 Further differences between the use of *only* and *merely* are noted by Wierzbicka (1986a): *merely* does not select referring expressions as foci and does not easily

combine with imperatives. Wierzbicka tries to account for this difference in the range of use of the two particles by making the following two evaluations part of the semantic formula of *merely,* but not of *only:*

(i) MERELY Y
Y is not much
Y is not something important

This analysis, however, fails to account for the fact that the scalar reading of *only* also expresses an evaluation and that the difference between the two evaluations concerns the scales over which they operate. The analysis proposed in this chapter accounts for the differences in the use of *only* and *merely* by associating all uses of *merely* with an evaluation which identifies a minimal point on a natural scale.

8 In Norwegian the exclusive particle *bare* by itself can be used in this function:

(i) Bare han kommer, er alt vel.
'If only he comes, all is well.'

9 In contrast to English, a PP is a bounding node in German, i.e. the scope of an operator inside that PP cannot extend beyond that PP (cf. Jacobs, 1984b).

10 This analysis is based on Ducrot's general theory about the argumentative value of function words. According to Ducrot, these argumentative values may differ from the relevant semantic values.

11 Similar observations have been made with regard to *cai* in Mandarin (Tsao, 1976). The following examples show that this adverb expresses different evaluations in different contexts:

(i) Xianzai cai si-dian-zhong.
Now only 4 o'clock
'It is only 4 o'clock.'
(ii) Duo yijing guo-le wu-yei, yueliang cai chulai.
already passed midnight moon only then came out
'It was only after midnight that the moon came out.'

These examples as well as the following minimal contrast discussed in Alleton (1972:142) show that *cai* in Mandarin takes wide scope over a complex sentence if it precedes the second predicate:

(iii) you wu ge ren cai ban de dong
(exist five Class, people only move Result, shift)
'Only with five people did we manage to move it.'
(iv) cai wu ge ren (jiu) ban de dong.
(only five Class, people then move Result, shift)
'With only five people we managed to shift it.'

12 This terminology may look somewhat surprising in view of the fact that this 'imperfectve' use of *erst* often co-occurs with the perfect. But note that the perfect can be analysed as an operator that maps an event onto a state (i.e. the 'aftermath' of the event in question) (cf. Löbner, 1987b).

13 It is possible to think up an ambiguous example, like the following, where *erst* may exclude either values higher or lower than the one given:

(i) Erst fünf Biere belasten deinen Kreislauf.

a. 'It takes five glasses of beer to impair your circulation.'
b. 'Only five glasses of beer are so far straining your circulation.'

But although (i) looks like a genuine case of ambiguity, the phrase focused on by *erst* plays a different role in the two interpretations. Under interpretation (a) the sentence describes a necessary condition; under interpretation (b) it describes the state reached by a development at the moment of utterance.

14 Informal analyses of G. *erst* and its counterpart *pas* in Dutch can be found in König (1979b) and Vandeweghe (1983).

15 In the variety of South American Spanish described in Zierer (1984), the historical development seems to have taken the opposite direction. The retrospective use of *recién* 'recently' seems to have led to the use of that adverb in the sense of *not…until,* i.e. to a use analogous to the 'perfective use' of *erst*. In this variety of Spanish the following two sentences are equivalent:

(i) Los bancos no abren hasta las diez.
'The banks don't open until ten.'
(ii) Los bancos recién abren a las diez.

Note that the complementary relationship that links the 'perfective' and 'retrospective' use of G. *erst* and Sp. *recién* can also be detected in pairs like *as recently as* vs. *as late as* or *recently* vs. *lately.*

16 Note that the temporal adverb *just* does not necessarily refer to the immediate past but may also refer to the moment of utterance.

(i) We are just having dinner.

These two interpretations of temporal *just* are clearly in complementary distribution and depend on the tense of the sentence.

17 Even in contexts like (83), in which these expressions are more or less interchangeable, there is, however, a clear difference between *barely/hardly* and *just:* the addition of *just* to a sentence does not result in a downward-entailing context. Moreover, universal or free-choice quantifiers like *anybody* are treated by *just* as the type of context exemplified by (80). *Barely* and *hardly,* by contrast, combine with such quantifiers to form expressions that belong to the same scale as *not all, few* and *none* (Cf. Horn, 1989:237ff.)

18 Wierzbicka (1986:598) also considers the metalinguistic quality as an important ingredient of *just*. One of the essential features of this particle is described by her as follows: '"x" and not something other than "x" is a good word to say about it.'

6
Identical values in conflicting roles

1 Note that cleft sentences in English are often used to translate sentences with *gerade* and *eben* in German.
2 The meaning of a concessive sentence of the general form 'even though p, q' can roughly be described as follows: both 'p' and 'q' are asserted against the background assumption of a general incompatibility between the event types 'p′' and 'q′' which 'p' and 'q' instantiate, i.e. If 'p′' then normally not 'q′'.
3 I have to admit at this point, though, that the evidence for the assumption that *ausgerechnet* basically expresses identity is not as clear as it is in the case of *genau, gerade* and *eben*.
4 An analogous development has led to the concessive sense of *evenwel* in Dutch ('however, yet, still, nevertheless'), whereas D. *even* is still used more or less like *eben* in German. E. *even* has, of course, also developed a purely concessive meaning in combination with *so* and *though.*
5 The derivation of Fr.*voire* 'and even, indeed' from Latin *verum* 'truth' is yet another example of such a development.

7
Focus particles and phase quantification

1 The glosses that typically co-occur with 'still' are 'else', 'more', 'another', 'as late as' and 'even'; those co-occurring with 'already' include 'as early as', 'even', 'as far back as'.
2 These remarks are based on Löbner (1987b).
3 In his comparative study of twenty European languages, Vandeweghe (1986) found two pervasive tendencies:

(i) The forms with the inner negation tend to be preferred,
(ii) If the forms with the outer negation are used, suppletive forms like *yet, any more* tend to replace the normal expressions.

4 The reference time in such sentences is either provided by the moment of utterance (He is still sleeping); by some adverbial (He was still sleeping at eight); or by some event description (He was still sleeping when we arrived).
5 In contrast to German *noch* or English *still, encore* in French and *hai* in Mandarin have both the aspectual ('durative') reading described above and an iterative reading:

(i) Ta hai zai shang zhongxue.
'He still goes to grammar school.'
(ii) Ta mingtian hai yao lai.'

(He tomorrow again wants to come)

'He will come again tomorrow.'
(cf. Paris, 1988)

Expressed in the terms of the truth conditions specified above, the reference point in sentences with F.*encore* or Mand. *hai* may follow both a positive and a negative phase.

6 A possible explanation for the fact that somebody's victory is characterised as unexpected in sentences like (26) and (28) might run as follows: in the case of a game or a race the outcome is obvious—somebody will win. Other developments do not have such obvious outcomes or culminations. Sentences with 'perfective' *noch* describe both a development and a culmination or outcome. Since the outcome is obvious in the case of a game or a race (as far as its type is concerned), it is the identity of the winner and the development that is emphasised in such sentences. But the information concerning the development can only be relevant if it is not obvious to the hearer. What sentences like (26) or (28) express is therefore a surprising development with the natural outcome that such developments have. In sentences like (27), by contrast, the development is obvious to the hearer and the predicted outcome is the surprising part.

7 See König and Traugott (1982) for a detailed discussion of these developments.

8 In other words, the compositional make-up was exactly parallel to that found in the equivalent French sentence:

(i) Jean n'est pas encore là.

9 These two steps of reanalysis did not always go together. The *OED* cites three examples of *not yet=no longer* (s.v. *yet,* 2b). This means that *not* was assigned wide scope without an accompanying reinterpretation of *yet.* However, this phenomenon seems to have been rare. Two of the examples given in the *OED* are taken from the same source, which—moreover—is a translation from French.

10 In interrogative sentences, *yet* and *already* contrast:

(i) Has he arrived yet?
(ii) Has he arrived already?
(iii) Hasn't he arrived yet?
(iv) Hasn't he arrived already?

11 This restriction does not apply, of course, to the concessive conjunct (conjunctional adverb) *yet*.

12 The following example shows that the addition of the clitic *-pal-pä* neutralises the distinction normally expressed by *jo* vs. *vielä* (cf. Välikangas, 1982:391):

(i) Asia on vaikea, jopa/vieläpä mahdoton ratkaista.
(The matter is difficult even impossible to settle.)

'It is difficult, even impossible, to solve the problem.'

13 In his analysis of *schon* and *erst,* Löbner advocates again a strictly minimalist position. The evaluations expressed by *schon* in sentences like (61)–(65) are not regarded as being part of the conventional meaning of that expression, a view which I find difficult to accept. Another problem for which Löbner has no convincing solution is the question why the scales associated with certain contexts of *schon* and *erst* are reversed in others.

8
Historical aspects

1 Russ. *daže* is composed of *da* 'yes' and 'but' and the particle *že,* which can independently be used as a focus particle with the meaning 'however, also, for my part, very' and also occurs as a component in takže, tože (cf. Borras and Christian, 1959:246).

2 The inclusion of 'purity' into the set of privative notions is perhaps somewhat problematic and it might be necessary to distinguish a separate source for *merely, purely,* etc.

3 The etymology of a number of restrictive particles in Slavic languages (Russ. *tol'ko,* Pol. *tylko,* etc.) does not fit into any of these three groups, however. Russian *tolko* is generally assumed to derive from a source that includes the demonstrative adverb *tot,* the interrogative particle *-li* and the affix *-ko* found in many other adverbs and function words: *tot-li-ko* > *tolko*.

4 Both Dutch *maar* and G. *nur* historically derive from a negative construction: Neg. +some optative form of *be*. (D. *newaer, newâre* > *nemaer, nemare* > *maer, mare* > *maar,* G. *niwari* > *newaere* > *nur* (cf. J.De Vries, 1971, s.v. *maar*).

5 The etymology of Finn, *vain* 'only' (<*vaivoin* 'with difficulty' cf. Fr. *à peine*) is yet another example of this tie-up (cf. Hakulinen, 1979:106).

6 'Discourse particles', or 'discourse markers', like *oh, well, you see, you know, so, I mean* in English (cf. Schiffrin, 1987) differ very clearly in their syntax and, to a large extent, also in their meaning from modal particles. In Bublitz (1978) the following strategies are listed for the translation of German modal particles into English:

(i) use of prosodic means (intonation, heavy stress)
(ii) tag questions
(iii) reinforcement of main verbs (*go and*…)
(iv) use of quasi-particles *(you see, you know)*
(v) selection of a certain polarity (e.g. negative+interrogative)
(vi) use of *do* in imperatives, etc.

One of the few cases where one might want to speak of 'modal particles' as opposed to focus particles or discourse markers in English, is the use of *too* and *either* in sentences like the following (Goddard, 1986; Green, 1973:245):

(i) a. A. You didn't take it?—B. I did tóo. (emphatic disagreement)

b. A. You're Fred?—B. I am, tóo. (emphatic agreement)

(ii) I am not either in that class.

But this usage seems to be very colloquial and informal.

7 Interestingly enough, the expressions listed in Kärnä (1984:86) for Finnish seem to have developed from more or less the same sources as their counterparts in German, i.e. from conjunctions, adverbs, focus particles and pronouns.

8 Among the numerous studies on modal particles in German, those that come closest to the view presented below are those by Brausse (1986), according to whom these expressions relate to already existing assumptions and provide argumentative signals; Bublitz (1978), who analyses these expressions in terms of quasi-syllogisms; and to a certain extent Franck (1980), who sees one out of six functions of modal particles in providing contextualisation clues and in focusing certain properties of the context that have to be included into the interpretation process.

9 The fact that I find Blakemore's views on connectives inspiring does not mean that I accept all basic assumptions of Relevance Theory. For the analysis of particles presented below, it is not essential that all Gricean maxims should be reduced to one ('Relevance'), that conversational inference should be based primarily on deduction, or that Relevance should be defined as contextual effects over processing costs.

10 Note that many modal particles derive from deictic expressions and are therefore often referred to as 'communicative deictics' (cf. Hentschel, 1986).

11 Since modal particles relate to more than one of these functions, such a classification leads to overlapping rather than disjunctive classes.

12 There is, however, no need for our analysis to account for every use. Some uses of *doch* in combination with certain patterns of word order, e.g. the combination of *doch* with a sentence-initial verb, are best analysed as 'constructions' in the sense of Fillmore, Kay and O'Connor (1988).

13 One more view that is worth mentioning in this context is Brausse's (1986) analysis of *ja* as indicating that the containing sentence is used as an argument for a conclusion given in the preceding context:

(i) Ich werde das Lied wieder singen. Ich habe es ja geschrieben.
'I will sing that song again. I wrote it.'

This view could easily be integrated into the framework developed above, but it does not seem to be applicable to many uses of *ja*. As far as I can see, the second sentence of (i) would still be interpreted as an argument for the first assertion if *ja* were omitted.

14 There is, however, a third aspect that seems to be part of the meaning of these three expressions. In various descriptive articles, *eben* is analysed as an expression of resignation. Even though I do not think that particles generally express attitudes, there seems to be a reliable intuition behind this view. *Eben, halt* and *nun mal* are typically used in premises or conclusions that are hard to accept. It is precisely such statements which are in need of being strengthened by such evidentials.

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