How writers begin their sentences

Complex beginnings in native and learner English
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Complex beginnings: Initial considerations

1.1 Introduction
In English texts written by advanced Dutch learners one may come across sentences such as given in (1a) and (1b):¹

(1) a ?After the downfall of the United Republic, the French era and the United Kingdom, by the end of the nineteenth century the Kingdom of The Netherlands was created. [LEC 2-78-281]
   b ?However, as will be shown later, after the notion rhythm has been discussed, rather than the kind of song determining the frame of the lyrics, in the case of original poetry being scored, the frame of the lyrics determines the kind of song. [LEC 4-7-16]

There is something funny about these sentences that might induce tutors to make use of the proverbial squiggly line. But what is it that makes them infelicitous? Is it that one has to wait too long until the subject comes? Is there something about the context that makes their textual fit less than perfect? Or is there something about the relationship between the two elements preceding the subject? It is at least not the case that English does not allow more than one adverbial constituent before the subject. This is clearly shown by the sentences in (2).²

(2) a Indeed sometimes the truth is even more bizarre than the myths that grow up around it - like the famous visit to Newcastle in February 1967 of the notorious Kray Twins. [NEC 101-290]
   b For me, in order to feel most myself, I very frequently feel I need to be alone! [NEC 57-198]
   c When he joined The Guardian 30 years ago, however, he found it easy to espouse the paper's long-standing philosophy that, if only good men (and women) got together, the world would be a nicer place. [NEC 77-229]
These combinations of sentence-initial adverbials are examples of what I will call complex beginnings, and it is the aim of this study to investigate the form, function and use of these sentence openings in written native and learner English.

It has been widely noted that the starting point of a sentence potentially fulfills special functions, both at sentence level and at discourse level. At sentence level language producers and interpreters use the initial elements as a starting point for organization and comprehension of the sentence itself (MacWhinney 1977:152, Chafe 1987:36, Gernsbacher 1990). At discourse level they use these first elements to fit the sentence into its situational or textual context (Chafe 1987:38, Fries 1981/1983, 1995, Daneš 1974, Enkvist 1981, 1984, Virtanen 1992, Ventola 1995, Mauranen 1996, Svensson 2000).

Consider as an illustration for this last function example (3) below:

(3) The only solution seems to be a strict family planning program, which was indeed put into force in 1981 [1]. During the first few years no couple was allowed to have more than one baby [2a], but later this policy was softened [2b]. At present families in rural areas are often allowed to have to children [sic], especially if the first baby is a girl [3]. [LEC]

Sentence [1] in this passage sets up a context in which not only the topic of the paragraph is introduced (a strict family planning program) but also the time line according to which the topic is going to be discussed (the program is put into force in 1981). The starting points of clauses [2a] and [2b] and of sentence [3] (during the first few years, later and at present) locate the respective events on this time line and as such they help fit them in their context. When the starting points of individual sentences are well-chosen, therefore, they simplify the reader’s task to establish the relevance of each new addition to the passage, they provide a sense of progression and they support a coherent development of the discourse they are part of. In other words, they facilitate understanding of that discourse (see also Svensson 2000:103).

Conversely, unhappy selections of initial elements can destroy the flow of the discourse and frustrate or at least complicate attempts to understand. Compare as an illustration the frequently quoted passages in (4), taken from Fries (1983:129,133). The first sentence of the authentic
example in (4a) introduces a topic: how American participation in World War I differed from American participation in World War II. The rest of the paragraph is developed according to this contrast: all initial elements refer to either the first or the second conflict and the clauses that follow these introductions then describe the relevant acts of war particular to those conflicts. The passage in (4b) is constructed for research purposes, and based on the passage in (4a). In this version the initial elements are changed, thus systematically destroying the method of development of the original text. According to Fries, readers of this last text complain that it is “unorganized”, and that it “seems to contain ideas which belong in several different paragraphs” (1983:133). None of these reactions were given by readers who were asked to judge the original version.

(4) a Although the United States participated heavily in World War I, the nature of that participation was fundamentally different from what it became in World War II. The earlier conflict was a one-ocean war for the Navy and a one-theater war for the Army; the latter was a two-ocean war for the Navy and one of five major theaters for the Army. In both wars a vital responsibility of the Navy was escort-of-convoy and anti-submarine work, but in the 1917-1918 conflict it never clashed with the enemy on the surface, whilst between 1941 and 1945 it fought some twenty major and countless minor engagements with the Japanese Navy. American soldiers who engaged in World War I were taken overseas in transports and landed on docks or in protected harbors; in World War II the art of amphibious warfare had to be revived and developed, since assault troops were forced to fight their way ashore.7

b Although the United States participated heavily in World War I, the nature of that participation was fundamentally different from what it became in World War II. For the navy the earlier conflict was a one-ocean war and for the Army a one-theater war; the latter was a two-ocean war for the Navy and one of five major theaters for the Army. A vital responsibility of the Navy was escort-of-convoy and anti-submarine work in both wars, but it never clashed with the enemy on the surface in the 1917-1918 conflict; whilst some twenty major and countless minor engagements were fought with the Japanese Navy between 1941
and 1945. American soldiers who engaged in World War I were taken overseas in transports and landed on docks or in protected harbors; since assault troops were forced to fight their way ashore, the art of amphibious warfare had to be revived and developed in World War II.

To support the claim that choice of initial elements influences the comprehension of a passage with just one more example, consider also the pair of passages in (5), used in an experiment testing given-new structures by Vande Kopple (1986:82ff). Vande Kopple labeled the structure of the passage in (5a) as ‘topically linked’ (1986:82), by which he means that in this passage each sentence starts with a reference to the same topic. The rest of the sentence then conveys new information about this topic. In the passage in (5b), on the other hand, the structure is reversed. Here the sentences consistently start with new information while the the elements that follow feature given information:

(5) a Currently the Marathon is the best waxless ski for recreational cross-country skiing. Its weight is a mere two pounds. Yet its width allows the skier to break a trail through even the heaviest snow. Its most nearly unique characteristic is the fish scale design for its bottom. The Marathon is almost as effective as most waxable skis. In fact, it is even better than some waxable skis when the snow is very wet. The Marathon can be used with most conventional bindings. However, it works best with the Suomi double-lock. Finally, the Marathon is available in six different colors.

b Currently the best waxless ski for recreational cross-country skiing is the Marathon. A mere two pounds is its weight. Yet the skier can break a trail through even the heaviest snow with its width. The fish scale design for its bottom is its most nearly unique characteristic. Most waxable skis are only slightly more effective than the Marathon. In fact, some waxable skis are not as good as it when the snow is very wet. Most conventional bindings can be used with the Marathon. However, the Suomi double-lock works best with it. Finally, six different colors are available for the Marathon.
Vande Kopple presented the paragraphs to high school students and had them compare, judge, memorize or reconstruct the passages. The students who worked with the passage in (5b) made complaints that are similar to the ones Fries reported. One student, for instance, explained that this text “caused me to look back several times before I could follow it” (1986:88). Another criticized it, because he “would start to read and then wonder what the sentence is talking about” (ibid.). The paragraph in (5a), on the other hand, received praise, because it “let’s you know right away what it is about,” and because each sentence “tells you what you will be discussing first” (ibid.). Vande Kopple received similar results for other pairs of test paragraphs (see also Vande Kopple 1997 for a recent application of these principles in English writing classes).

Additional examples of how inappropriate choices of initial elements can destroy the discourse flow of a text can be found in Ventola (1995) and Mauranen (1996). Berry (1995), furthermore, provides an instance of how inadequate sentence-initial elements can give the reader a sense of genre inappropriateness. She shows that in a tour guide a consistent choice of interpersonal elements in initial position renders a text inappropriate for the kind of informational writing that is expected in such a text (see also Ghadessy 1995 and Berry 1996).

The research quoted above amply shows that if a language learner is to produce effective texts in the target language, she will need to be able to produce effective sentence openings (apart from the need to master vocabulary, grammar, etc.). As stated above, this study will concentrate on a particular type of sentence opening in written English, namely complex beginnings. It will approach this construction from a functional perspective, from a second-language perspective, and from a process-perspective. Before we can go into these three different perspectives and formulate the research questions that go with them, however, the concept of complex beginning needs to be introduced further.

Both in English and in Dutch writing, coherent development of the discourse is to a considerable extent the responsibility of the grammatical subjects, since it is the subject that in both languages most commonly represents the starting point of declarative sentences – the main constituent of written discourse (Sinclair et al. 1990:402, 428, Greenbaum 1996:59, Dik 1997a:43, Hasereyn et al. 1997:1262, 1280; see also Chafe 1987:37 for a similar observation for conversational English). However, both languages also allow adverbial elements to represent the starting point, a possibility that is used in Dutch more frequently than it is
in English (Dik 1997a:43, Hasereyn et al. 1997:1262). In such sentences, the adverbial assumes part of the subject’s text-organizational tasks. At discourse level the adverbial may, for instance, indicate rhetorical turns in the argumentation, mark topical shifts and breaks (Virtanen 1992), initiate or continue the method of development of a text (Fries 1981/1983, 1995a, 1995b), or make explicit the discourse theme (e.g. Berry 1996). At sentence level it provides an ‘orientation’ or ‘frame’ for the subsequent information unit (Hannay and Vester 1987, Dik 1997b, Fries 1995b:65, Halliday 1994, Gómez-González 1998).

Furthermore, in English - but not in Dutch - it is also fairly easy to place two or more adverbials in sentence-initial position, as was shown previously in the examples given in (2). Additional examples are given in (6) below:

(6) a **Furthermore, in English - but not in Dutch** - it is also fairly easy to place two or more adverbials in sentence-initial position. [2 adverbials in initial position]

b **For example**, although it is known that Jane [Addams] and wealthy philanthropist Mary Rozet Smith, who later became her ‘devoted companion’ (as biographers must acknowledge), always slept in the same room and in the same bed, and when they traveled Jane even wired ahead to be sure they would get a hotel room with a double bed, nevertheless most historians have preferred to present Addams as asexual. [NEC 8-7] [3 adverbials in initial position]

c **Today in Belize** there are some 230 primary schools employing about 1,950 teachers and enrolling 45,200 children. [NEC 34-153] [2 adverbials in initial position]

In these examples it is the initial adverbial cluster that provides an orientation for the sentence and that plays a part in the discourse organization. As stated earlier, these combinations of two or more adverbials in sentence-initial position will be referred to as complex beginnings.

Notice that in examples (6a) and (6b) the constituents that are part of the complex beginning are also commonly considered parentheticals or extra-clausal elements. That means that while these elements are in sentence-initial position, they are not in clause-initial position. In
example (6c), however, the elements that belong to the complex
beginning are part of the clause and they are therefore both clause-initial
and sentence-initial. These examples show that complex beginnings are
always in sentence-initial slots, while they can but do not have to be in
clause-initial slots. For convenience’s sake, this study will exclusively
use the umbrella term ‘sentence-initial position’. Chapters 2 and 5 will
briefly return to the distinction between clause-initial and sentence-initial
position when discussing descriptions of the functional structure for
sentence openings and the ways complex beginnings may fit in such a
structure.

The six questions regarding complex beginnings that this study will
concentrate on are divided over the following areas of interest:

form and function of complex beginnings
A What types of complex beginnings occur in English?
B What discourse functions do complex beginnings have?

a second language perspective on complex beginnings
C Do Dutch learners of English (undergraduate students) produce
the same types of complex beginnings, and in the same quantity,
as native speakers do?
D If they do not, can observed differences between complex
beginnings produced by native speakers and by Dutch learners be
attributed to language competence, to general discourse
competence and/or to language-specific discourse competence?

a process perspective on complex beginnings
E Are all types of complex beginnings produced in the same way?
F Do Dutch learners of English produce individual types of
complex beginnings in the same way as native speakers do?

Sections 1.2 through 1.5 present an introductory discussion of these
questions; they will also indicate how this study proposes to examine
them. More specifically, Section 1.2 will deal with types of complex
beginnings (question A), while Section 1.3 will consider the questions
regarding discourse functions of complex beginnings (question B).
Section 1.4 will then introduce issues concerning the second language
perspective on complex beginnings (questions C and D), and Section 1.5
will briefly discuss some topics raised by a process perspective on
complex beginnings (questions E and F). Section 1.6, finally, will lay out
the organization of Chapters 2 through 10.
1.2 Types of complex beginnings in English

The first question listed above – ‘What types of complex beginnings occur in English?’ – can be approached from two perspectives. Firstly, we can examine what adverbials actually combine in complex beginnings in English, and in what order. Secondly, we can examine for what reasons some complex beginnings encountered in non-native English texts might be viewed as unacceptable.

To start with the first perspective, traditionally descriptions of combinations in adverbial clusters have been based on concepts such as syntactic realization, semantic function (also referred to as semantic role; see for instance Quirk et al. 1985:565, Biber et al. 1999:762) and degree of integration into the clause (Quirk et al. 1985:479ff, 501ff, Greenbaum 1996:148). For instance, in the example in (7) below, the complex beginning By the early 1970s, however can be described as a combination of a prepositional phrase and an adverb phrase (syntactic realization), a temporal adverbial and an adversative adverbial (semantic function) or an Adjunct and a Conjunct (degree of integration).10

(7) By the early 1970s, however, this attitude was changing. [NEC 119-329]

Each of the three adverbial properties has inspired hypotheses with regard to the preponderant order in initial adverbial clusters and all of these hypotheses can be reformulated according to the following format:

(8) Typically, $x_1$ precedes $x_2$ precedes $x_3$ … precedes $x_n$.

Examples are:

(9) a For syntactic realization: Typically, adverbs precede noun phrases precede prepositional phrases precede clauses (Quirk et al. 1985:565)
   - Unfortunately, in Britain things are different.
   - At the end of the day, despite the growing wealth, people are still grumbling.

b For semantic function: Typically, SPACE precedes TIME precedes CONTINGENCY (Quirk et al. 1985:565).
   - In Britain today, as a result of the change in government, things are different.
Chapter 3 will discuss the hypotheses formulated in (9). At this point, suffice it to note that all hypotheses – in their original wording, too – leave open the possibility for other orders than the one they predict and that these alternative orders are therefore not a priori ruled out. This is most clearly illustrated by the fact that the parameter of ‘degree of integration into the clause’ (in [9c1] and [9c2]) has yielded two contrasting ordering principles; one in which Conjuncts are expected to precede Adjuncts and one in which Conjuncts are expected to follow Adjuncts. The question that needs to be answered, therefore, is to what extent the hypotheses paraphrased above predict the internal order of complex beginnings in an adequate way. If a particular hypothesis turns out to be accurate, the parameter on which it is based can be used as a starting point for a typology of complex beginnings. If not, another parameter needs to be found.

The second perspective from which question A can be approached – ‘Why are certain combinations considered unacceptable?’ – is inspired by examples such as in (10) below, which were collected by Ventola (1995) and Hannay (1994a) from texts produced by non-native speakers of English (see also the examples in (1) again):

(10) a In the diversified ethics discussion, aside from the potential dangers of special problem areas (nuclear energy, genetic engineering, information technology), the possibilities for a ‘rational’ guidance of technology and a responsible self-limitation are being debated. (Ventola 1995:100)

b Of the 300 participants in 139 cases fatigue was found. (Hannay 1994a:87)
Nowadays, frequently preservatives, aromatic substance, colourings and flavourings are used to prolong the storage life and to improve the tastiness. (Hannay 1994a:87)

Despite the superficial similarity between these sentence openings and the sentence openings in the examples in (11) below, the sentences in (10) are doubtful, if not unacceptable, whereas those in (11) are fine:

(11) a At Rochão, at about 25 min into the walk, you lose the levada. (Virtanen 1992:254)

b In spite of the difficulties, by the mid-1980s scientists had managed to isolate several cell-surface adhesion receptors. [NEC 11-96]

The question is, of course, what sets the sentence openings in (10) apart from those in (11)? This study proposes to address this question and the relative-order question discussed above, by examining a set of complex beginnings collected from a 500,000 word native speaker corpus consisting of three genres in written English (newspaper, academic, fiction). The relative order of the adverbials in these complex beginnings will be examined and the predictions in (9) will be tested. Based on this discussion, a typology of complex beginnings will be suggested and with the help of this typology differences between problematic examples and acceptable examples will be addressed. The analyses will be performed with the help of tools developed within the frameworks of Functional Grammar (henceforth FG) (Dik 1989, 1997a, 1997b, Hengeveld 1989, 1990) and Systemic Functional Grammar (henceforth SFG) (Halliday 1994).

1.3 Discourse functions of complex beginnings

It was stated above that since complex beginnings are by definition in sentence-initial position, it may be assumed that they play some part in the discourse organization. This study examines what kinds of discourse functionality complex beginnings may have, and in what ways the elements that constitute a complex beginning – and the order in which they are placed – affect this functionality (question B). Consider, as an illustration, the ‘degree-of-integration’- hypotheses in (9c1) and (9c2) again, repeated below for convenience:
(9)  

c1  *For degree of integration:* Typically Adjuncts precede Conjuncts  
(Quirk et al. 1985: 651)  
-  *In Britain, however,* things are different.

c2  *For degree of integration:* Typically Conjuncts precede Disjuncts  
precede Adjuncts (Halliday 1994:53, Hengeveld 1997:134,  
Bolkestein 1992:398)  
-  *However, in Britain* things are different.

Irrespective of the possibility that one of the hypotheses may be more  
accurate than the other, we know that both hypotheses are at least  
accurate to the extent that the orders that they predict actually occur  
and are grammatically acceptable. Starting from the premises that different  
linguistic forms carry different functions, we will begin our examination  
of the discourse functions of complex beginnings with the assumption  
that the order *In Britain, however* is used to fulfill different tasks in the  
discourse organization than the order *However, in Britain.* This study sets  
out to examine what these tasks are, and in what ways they differ from  
each other, by analyzing the context of complex beginnings in the corpus.

It follows that from a language producer’s perspective, a central  
notion in the discussion of the functionality of complex beginnings is the  
notion of *discourse competence.* Writers who want to produce a  
successful text should be able to decide for each new sentence which  
information it should contain, how an orientation should be provided for  
the information, which orientation this should be and whether the selected  
orientation is appropriate for the specific text genre and for the intended  
readers. Making adequate decisions with regard to these factors requires a  
sense of text structure and organization, a sense of what is appropriate in  
a certain domain, and an educated guess with regard to what the intended  
readers are going to expect and what they are bringing to the text  
themselves (Kent 1999). When constructing a sentence containing a  
complex beginning, the task becomes even more complex. In such a case  
the writer not only needs to decide on whether or not to provide an  
orientation, and which concepts should be coded in this orientation, she  
also needs to determine which part of the orientation comes first and  
which comes last. This can only be appropriately done when the writer  
has a feel for the different effects that alternative orders have or may  
have. All these skills are included in the umbrella term *discourse  
competence.*
Notice that discourse competence as it is used here includes two strands of meaning that are not normally integrated into the same notion, the first being ‘appropriateness’ (see e.g. Morrow 1979) and the second being ‘connectedness’ (see e.g. Canale and Swain 1980). I follow McCarthy and Carter here, who argue that “such things as register and mode [i.e. ‘appropriateness’] are integral to the creation of discourse [i.e. ‘connectedness’], not in some way ‘parallel’ or complementary to it” (1994:174). They see “the chaining together of functions or speech acts as inseparable from the creating of larger patterns and genres in discourse”, while they at the same time see “the realization of registers, attitudinal features and topics as inseparable from coherence and its manifestations in surface cohesion” (ibid.) (see Mauranen 1996 for a similar interpretation). Appropriateness then encompasses skills such as knowing which thematic elements fit best in a specific genre (Berry 1995, Ghadessy 1995), and knowing which knowledge readers bring to the text. Connectedness refers to skills that derive from the “knowledge of how utterances and communicative functions can be combined according to the principles of discourse” (Canale and Swain 1980:30). This includes mechanisms such as coherence and cohesion (ibid., Canale 1983:23-4), and I will assume awareness of discourse functionality, ability to manipulate method of development and thematic progression, etc. to be included as well.12

1.4 A second language perspective on complex beginnings

Studying complex beginnings produced by Dutch learners of English is interesting for two reasons. The first one has to do with differences between Dutch and English sentence grammar; the second one, which to a certain extent results from the first, has to do with the functionality of complex beginnings in discourse.

To start with the first reason, Dutch is a firm verb-second language, whereas English is not (Greenberg 1963, van Hoorick 1994). This means that in Dutch the finite verb form is generally in second position and no more than one constituent is allowed in the preceding front field (Weinrich 1993:64, Hasereyn et al. 1997:1262). Complex beginnings are indeed rare in Dutch (as will be shown in Chapter 7) and Dutch learners of English cannot tap into knowledge of their native language where the construction and/or manipulation of complex beginnings is concerned. Since no positive transfer is in order, therefore (Ellis
1994:29), this would lead one to suspect that Dutch native speakers, at least those who are still in the early stages of learning English, do not produce a lot of complex beginnings when writing in English.

However, another difference between Dutch and English sentence grammar may in fact induce Dutch learners to overuse complex beginnings (see Ellis 1994:305 for the interpretation of overuse). Unlike English, Dutch allows clausal and phrasal adjuncts in sentence-medial positions. In English these same positions are more or less reserved for short adverbs (Weinrich 1993, Hannay 1994a). When Dutch learners transfer their syntactic coding of information to English (that is, when they code their information in the same syntactic constituents as they would in Dutch) they can find themselves stuck with a set of clausal and phrasal adverbials which are ‘developed’ for medial position in Dutch, but which are in English banned to the periphery of the sentence. They are then forced to place them in either sentence-final or sentence-initial position. When they have two or more adverbials that, for lack of other suitable positions, are placed sentence-initially, they have more or less accidentally created a complex beginning (see also Fries 1995b:63).

This is where the second reason for studying complex beginnings from a second-language perspective comes in. Where the information that is coded in an adverbial was ‘intended’, so to speak, for sentence-medial position, this information acquires an extra pragmatic functionality when it is placed in initial position and this extra functionality may be more than was originally planned (Hannay 1994a:86; see also Thompson 1985). The question then is whether learners are aware of this added functionality and if they are, whether they have attained such a level of discourse competence that they can change the information structure in a sentence in such a way (for instance, by compacting adverbial information in a Noun Phrase) that it better fits their original intentions. To put it more specifically, to what extent is the use of complex beginnings by Dutch learners of English more sentence-driven and less (or not at all) discourse-driven than the use of complex beginnings by native speakers? When considered from this perspective, the study of English complex beginnings produced by Dutch learners of English operates on the interface between sentence grammar and discourse structure and again this is where the notion of discourse competence comes in.

Although Dutch learners of English may be expected to have attained a certain level of discourse competence in their native tongue, it
is by no means obvious that this discourse competence is transferred when
the learners are writing in English. An example of this is provided by
Mauranen (1996). She shows that native speakers of Finnish – who are
experienced writers in their native tongue, and who have attained a
reasonably advanced command of English sentence grammar – run into
considerable difficulties when their isolated sentences are to be combined
into a text. She analyzed a number of English and Finnish texts produced
by these Finnish subjects, and – using the notions of thematic progression
(Daneš 1974) and method of development (Fries 1981/1983, 1995a,
1995b) – she observed that her subjects produced radically more
sentences with unmotivated Themes and disconnected Rhemes (both
concepts are used in Halliday’s SFG-sense) when writing in English than
when writing in Finnish. Mauranen suggests a twofold explanation for
her results: in the first place, when writing in English the native speakers
of Finnish may have to spend a considerable amount of their available
resources on processes that native speakers have more or less
automatized (e.g. creating grammatical sentences, access to vocabulary,
and spelling). This leaves less energy for creating coherent discourse. In
the second place, when constructing discourse in English, one not only
has to adhere to English sentence grammar, but also to Anglo-American
standards of text organization, and these may differ from text
organization standards that are prevalent in texts produced in the learner’s
native tongue (see e.g. Clyne 1987, Mauranen 1993, Ventola and
Mauranen argues that when native speakers read texts produced by non-native speakers they should not only be willing to look
beyond sentence-level errors resulting from a less than perfect command
of the target language grammar and vocabulary (as native speakers are
often prepared to do), but they should also make allowances for problems
that occur at text-level, since text-level problems can be as much a result
of the fact that the text producer is a non-native speaker as sentence-level
problems may be (1996:195).

This study proposes to address the questions related to the second
language issues in two steps. The first step is to analyze a set of complex
beginnings collected from a Learner English Corpus consisting of
500,000 words (including essays and chapters in theses produced by
Dutch students of English). The form and use of these complex
beginnings will be compared to the form and use of complex beginnings
encountered in native English (taking the genre differences into account
as much as possible). Since the sources of the Learner English Corpus consist of texts produced by (a) first year students, (b) second year students and (c) third and fourth year students of English, the analysis will also include a semi-longitudinal perspective. Again, such a corpus study operationalizes the discourse competence in just one way. It does not, for instance, provide information about whether or not a particular type of complex beginning in a text is the result of a conscious decision. If, for instance, a learner first produced one type of complex beginning, and later changed it into another type, this would suggest some level of awareness of the different effects that different types of complex beginnings may achieve. The second step in studying learner complex beginnings, to be described in Section 1.5, will therefore involve a comparison of learner production processes of complex beginnings and the production processes of native speaker complex beginnings.

1.5 A process perspective on complex beginnings
Consider yet again the contrasting ‘degree-of-integration’ hypotheses in (9c1) and (9c2). When the sources of the two predictions are compared, an interesting contrast is revealed. The prediction in (9c2), a prediction formulated within the frameworks of SFG (Halliday) and FG (Bolkestein and Hengeveld), is essentially based on the role that the different adverbial types are assumed to play within the boundaries of the sentence. In other words, it is formulated from a theoretical perspective. Quirk et al’s prediction in (9c1), on the other hand, is based on the preponderant orders in the complex beginnings that they encountered in their Survey of English Usage, i.e. an empirical perspective. In order to appreciate the relevance of the differences between these two sources, I will briefly consider Halliday’s reasons for assuming a Conjunct-Disjunct-Adjunct order in complex beginnings (discussion of FG’s reasoning will be postponed, since it requires a familiarity with FG concepts that will only be introduced in Chapter 2).

When discussing Multiple Themes – a functional unit that partly coincides with complex beginnings (see Chapter 2) – Halliday argues that “If a speaker includes within the message his or her own angle on …[a] matter, it is natural to make this [angle] the point of departure: ‘I’ll tell you what I think’. Similarly, if there is some element expressing the relationship to what has gone before, by putting this first, we thematize the significance of what we are saying: ‘I’ll tell you how this fits in.’”
(1994:49-50). According to Halliday, this leaves Disjuncts and Conjuncts with a ‘natural thematic status’ (1994:94) and as a result, in English, they generally end up in initial position (initial position being the grammatical means that English uses to realize Theme). Halliday then states that “[b]ecause the thematic status of … [Disjuncts and Conjuncts] is built in, so to speak, it is also somewhat attenuated, they may not exhaust the thematic potential of the clause” and can therefore be followed by an experiential adjunct (1994:52-3). In other words, according to Halliday, a Conjunct-Disjunct-Adjunct order is most ‘natural’.

However, according to Quirk et al.’s observations of complex beginnings in use, the order that is most commonly encountered in actual texts is Adjunct-Conjunct. If Quirk et al.’s counts are correct, and if Halliday’s assumptions hold any merit, then this begs a set of questions with regard to how complex beginnings are produced. Are Conjunct-Adjunct orders, for instance, only the most ‘natural’ orders when we consider sentences in isolation and do particular contexts provide ‘naturalness’ to the reverse order? Can, in that case, Halliday’s ‘natural’ order possibly be associated with the writing of novice writers, who – as Mauranen (1996) holds – concentrate more on individual sentences than on sentences in discourse, while the reverse orders only come into play when writers are more advanced and have attained a higher level of discourse competence (that is, when they are able to manipulate their sentence openings in such a way that they properly support the discourse flow). Or are Conjunct-Adjunct orders the starting point for all language users and are Adjunct-Conjunct orders only produced when the context requires such an order (and then only by language producers who are capable of recognizing such needs)? Can it for instance be shown that language users produce one type of order in the early stages of the writing process and then change this order in the editing stage, when the focus moves from sentence grammar to discourse flow?

These questions are relevant for both native speaker and learner complex beginnings and will be investigated with the help of an exploratory psycholinguistic experiment which tracks the construction processes of complex beginnings in isolation as well as in context (see Chapters 8 and 9).
1.6 Overview of the chapters

Before the research questions on complex beginnings can be properly investigated, it will be necessary to establish which constructions this study will consider to be complex beginnings, in a way that is more robust than simply stating that complex beginnings are ‘sentence-initial clusters of two or more adverbials’ (see Section 1.1 in this chapter). Exact definitions are needed of (a) which syntactic elements will be considered adverbials, (b) when a string of phrases will be considered to consist of two adverbial constituents rather than one complex one, and (c) where exactly sentence-initial position is considered to begin and where it ends. These matters will be taken care of in Chapter 2.

The form-and-function questions of this study will be dealt with in Chapters 3 through 5. Chapter 3 will present an analysis of complex beginnings encountered in a native English corpus, and will include a discussion of the relative-order hypotheses presented in the examples in (9) above. As a result of this discussion, Chapter 4 will introduce a typology of complex beginnings and consider reasons for the unacceptable status of examples such as in (1) and (10). Chapter 5, finally, will consider the discourse functions of complex beginnings.

The first part of the second-language questions will be discussed in Chapters 6 and 7. Chapter 6 will analyze complex beginnings collected from a learner English corpus and use the typology developed in Chapter 4 to compare these learner complex beginnings to native English complex beginnings. Chapter 7 will discuss the results of this comparison and introduce issues regarding language competence and discourse competence and how both of these may translate into the writing process of language users. The process perspective will then be further investigated in Chapters 8 and 9. Chapter 8 will describe a pilot experiment that is designed to explore production processes for complex beginnings. Chapter 9 will then report on the results of this experiment. Chapter 10, finally, will collect the results from all preceding chapters and return to the six questions posed above.

Notes

1 The examples are taken from the Learner English Corpus (LEC) that will be described in Chapter 6; [LEC 2-78-281] stands for: example 281 taken from
text 78 produced by a 2nd year Dutch learner of English.

2 NEC stands for Native English Corpus; [NEC 101-290] stands for example 290 from text 101.

3 Gernsbacher’s hypothesis is slightly different. She proposes that it is the first-mentioned participant, not the first element, that forms the foundation for the sentence level structure (1990:11). She observed that the first-mentioned participant in a sentence is recollected more quickly by subjects than other participants, and in a series of experiments she shows that this ‘Advantage of First Mention’ (1990:10) is not due to semantic agency, subjecthood, or absolute initial position (1990:10ff). However, in the experiment designed to test if the first-mentioned participant was still easier to recollect than the second one when it was not in absolute initial position (as in Two weeks ago Tina mailed Lisa a box of clothes), the result tables show some interesting figures. Although the first participant was still recollected more quickly than the second one, this recollection also took longer than in a sentence without preposed adverbials. (1990:16). This suggests that in this sentence at least part of the foundation is laid by the adverbial, i.e. by the starting point of the sentence.

4 See for an overview of sentence-initial functionality also Gómez-González 2001:50

5 This example, too, is taken from the Learner English Corpus. Examples of complex beginnings collected from the various corpora that are used in this study are normally labeled (corpus type, text number and example number). The example under (3) does not feature a complex beginning, however, and as a result it is not included in the numerical system).

6 This analysis shows that clause-initial elements can fulfill the same discourse function as sentence-initial elements. However, while clausal openings will sometimes be considered in the analysis of example passages, this study exclusively concentrates on sentence openings and will therefore only speak of the function of elements in sentence-initial position. The reason for this will become clear towards the end of Section 1.1, where the notion complex beginning is further introduced.

7 The bold face emphasis in the first line is mine. The other emphasis-indications are copied from Fries (1983:129-30). The actual example is longer, but the passage quoted in (2) serves as an adequate illustration.

8 Throughout this study language producers of constructed examples will be referred to with female pronouns, whereas abstract interpreters of such examples will be referred to with male pronouns. Where authentic examples are discussed, the pronouns are obviously in accordance with the gender of the person who produced those examples.
See also Altenberg 1998 and Svensson 2000 for similar observations with regard to Swedish compared to English. However, see also Hannay 2001 who states that English is not nearly as subject-prone as is generally assumed, with 32% of the sentences in his sample (845 out of 2627) featuring one or more adverbials in pre-subject position.

The labels Conjunct, Adjunct and Disjunct are borrowed from Greenbaum (1996:146). The class of Conjunct includes adverbials such as however, nevertheless, for example; the class of Disjunct includes adverbials such as of course, unfortunately, in my opinion, technically speaking; the Adjunct class, finally, includes adverbials such as in 1997, in Amsterdam, when Daan was still a kid, etc.

In reality, Halliday on the one hand and Bolkestein/Hengeveld on the other hand use different labels for the categories of Conjunct, Adjunct and Disjunct. For the sake of convenience, I will use the labels Conjunct, Adjunct and Disjunct throughout Chapter 1. After introducing concepts from Functional Grammar and Systemic Functional Grammar, I will replace these labels with more functionally oriented terminology.

Notice that this is still a relatively narrow interpretation of discourse competence when compared to definitions that are current in sociolinguistics. Consider, for instance, Gutierrez (1995:22), who writes that acquisition of academic discourse competence should not be limited to acquisition of procedural knowledge on how to use language, but that adequate discourse competence includes “opportunities for socialization to academic discourse and, thus, membership into a particular community”. This definition she later expands by stating that “becoming a member of a discourse community and developing discourse competence requires having linguistic knowledge, as well as knowing how to act, talk, interpret and think according to a particular cultural and social group” (1995:23-4). Consider also Gee (1990:143), who defines discourse as a “socially accepted association among ways of using language, of thinking, feeling, believing, valuing, and of acting that can be used to identify oneself as a member of a socially meaningful group or ‘social network’, or to signal [that one is playing] a socially meaningful ‘role’”.

See however Auer (1996) for exceptions in spoken German, and Dik (1997b:382) for exceptions in Dutch; see also König and Van der Auwera (1988:105ff).

Note, by the way, that while this line of reasoning indeed leads to a hypothesis that experiential adverbials naturally follow textual or interpersonal adverbials, it does not account for Halliday’s statement that interpersonal adverbials also follow textual adverbials. Possibly, part of an explanation may be found in Berry (1996), who, for a limited sample, shows
that textual goals are generally achieved in the sentence area preceding the finite verb form, while interactional goals are generally achieved in the sentence area preceding *and* including the lexical verb. This may suggest a general tendency in which, ‘typically’, textual elements precede interpersonal ones.
A definition of complex beginnings

2.1 Introduction
In Chapter 1 complex beginnings were loosely defined as ‘combinations of two or more adverbials in sentence-initial position’. While this definition seems adequate enough at an intuitive level, when applied to actual sentences its scope depends on the exact interpretation of ‘adverbial’, ‘two or more’ and ‘sentence-initial position’. Accordingly, Sections 2.2 through 2.4 will seek to establish specific interpretations of these notions.

Not surprisingly, the discussions below will show that the class of complex beginnings, as most linguistic classes, does not live up to the Aristotelean conditions for categorization (Lakoff 1987). That is, it is not possible to identify properties that all complex beginnings share and that all ‘non-complex beginnings’ lack. Distinguishing complex beginnings from non-complex beginnings is therefore necessarily a subjective matter. Normally, such an observation would justify the presentation of a reliability test (i.e. measure of agreement between several linguists’ scoring of complex beginnings) to support the analysis. However the discussions below will also show that at this stage the categorization of complex beginnings does not hinge so much on individual examples (‘Is this particular example a complex beginning or not’) as it hinges on sets of cases (‘Should sentence-initial combinations including a rhetorical adverbial be considered complex beginnings or not’). Rather than a reliability test of the analysis, this study chose to paint the broader outlines and presents in detail the principals based on which certain sets of examples were included in the category ‘complex beginning’ where other sets were excluded.
Chapter 2

2.2 Adverbials

As a category, adverbials exhibit a large range of semantic and grammatical functions and they are realized by many different structures. Semantically speaking, adverbials can provide additional information about circumstances, activity, and participants; they can be used to express comments on content and style, and they can also serve connective functions (Biber et al. 1999:762ff). Grammatically speaking, they are relatively mobile and they are usually realized by optional constituents, although obligatory phrases such as on the bed in ‘She leaves her clothes on the bed’ are sometimes also referred to as adverbials (Aarts and Wekker 1987:93, Wales 1989:12, Quirk et al. 1985:505, Biber 1999:763). Within the framework of FG, these obligatory adverbials are labeled ‘arguments’ (Dik 1997a:51), while optional adverbials are labeled ‘satellites’ (Dik 1997a:51, Dik et al. 1990:26). This study is interested in ‘satellites’ and this section will therefore be concerned with distinguishing satellites from all other sentence elements (see also Quirk et al. 1985:505, Biber et al. 1999:763, etc. who all distinguish between optional and obligatory Adjuncts). Note that from now on the labels ‘adverbial’ and ‘satellite’ will be used interchangeably and that accordingly ‘adverbial’ will refer only to optional constituents.

Satellites are generally characterized based on the three different properties that were introduced in Chapter 1, namely ‘syntactic realization’, ‘semantic function’ and ‘degree of integration into the clause’ (see for an overview of yet other internal classifications of adverbials Virtanen 1992:20). Because the last of these three properties yields a classification of satellites that is hierarchical, it seems a good starting point for delineating satellites from all other sentence elements. After all, all that seems to be needed then is to draw one line at the bottom end of the category and then one more at the top end. Before we can do so, however, some theoretical issues behind this classification need to be discussed.

When classifying adverbials according to ‘degree of integration into the clause’ (and this label is used loosely here, since not all theories explicitly accept its implications), all grammars but one agree on the three major categories that are presented in Table 2.1 (the exception being Quirk et al. [1985], who recognize four major categories). They furthermore all agree that the order in which these categories are presented in this table reflects a decreasing degree of clause-integration:
A definition of complex beginnings

<table>
<thead>
<tr>
<th></th>
<th>Category I</th>
<th>Category II</th>
<th>Category III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quirk et al. (1985)</td>
<td>Adjuncts</td>
<td>Disjuncts</td>
<td>Conjunctions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subjuncts</td>
<td></td>
</tr>
<tr>
<td>Sinclair et al. (1990)</td>
<td>Adjuncts</td>
<td>Sentence Adjuncts</td>
<td>Linking Adjuncts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjuncts</td>
<td></td>
</tr>
<tr>
<td>Greenbaum (1996)</td>
<td>Adjuncts</td>
<td>Disjuncts</td>
<td>Conjunctions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biber et al. (1999)</td>
<td>Circumstance Adverbials</td>
<td>Stance Adverbials</td>
<td>Linking Adverbials</td>
</tr>
<tr>
<td>Halliday (SFG) (1994)</td>
<td>Experiential Adjuncts</td>
<td>Interpersonal Adjuncts</td>
<td>Textual Adjuncts</td>
</tr>
<tr>
<td>Hengeveld (FG) 1997</td>
<td>Representational satellites</td>
<td>Interpersonal satellites</td>
<td>Rhetorical satellites</td>
</tr>
</tbody>
</table>

Table 2.1: labels for classification according to degree of integration

Category I – the category of adverbials that is most integrated – includes those adverbials that add information about the action or state described in the clause. These adverbials answer questions such as “How, When, Where, How much, To what extent and Why?” (this formulation is taken from Biber et al. 1999:763; other grammars provide similar descriptions). Examples are in 1990, quickly, beside her, after intensive tests, after she arrived home that morning etc. Category II includes those adverbials that convey the speaker’s comments on what is being said (content) or on how it is being said (style) (again this description is from Biber et al. [1999:764], but similar descriptions can be found in other grammars). Examples are from my perspective, of course, possibly, definitely, to my surprise, most importantly, technically speaking, quite frankly. Category III, finally, includes those adverbials that serve a connective function (Biber et al. 1999:765), examples being however, furthermore, nonetheless, firstly, secondly, etc. This category of adverbials is generally considered to be least integrated into the clause.

Since this study adopts a functional perspective, I will concentrate on the FG and SFG-theories behind the integration-classification of adverbials. Before launching into these – admittedly rather cursory –
discussions, however, a brief remark on the developments within FG is in order. Since the introduction of a functional model of the clause (Hengeveld 1989), FG has seen various attempts to expand this functional clause model into a functional discourse model (cf. Hengeveld 2002). At this point, the impact of these attempts is not clear yet, and for practical reasons, therefore, this study adopts as a starting point the model proposed by Hengeveld 1997.1

The FG classification of satellites as presented in Table 2.1 follows directly from FG’s functional model of the layered structure of the clause (Hengeveld 1989, 1990, 1997). This model assumes that a clause consists of three different levels, ranging from representational at the lowest level via interpersonal to rhetorical at the highest level. According to Hengeveld (1989:128ff), such layered analysis is warranted by the fact that when a speaker uses a clause to describe an external situation (representational), she can never do so neutrally (interpersonal). Clauses inherently also convey information such as the speaker’s attitude and perspective towards the event or State of Affairs (SoA) and towards the Addressee. Any clause model should therefore be capable of representing at least a representational and an interpersonal function. Furthermore, in an attempt to expand the clause model into a discourse model, Hengeveld added an extra level at the top of the structure in the shape of the rhetorical level. This level houses those elements that handle the integration of a particular clause into its discourse. The resulting model is given in Figure 2.2:2

As Figure 2.2 shows, both the representational level and the interpersonal level consist of two internal layers each. The predicate layer in the representational level takes care of modifications that affect the *internal* structure of the event that is being referred to. The predication layer features those language elements that specify and modify *external* characteristics of this event. At the interpersonal level, the propositional layer houses those language features that deal with the speaker’s evaluation of the event, (for instance, its truth value) while the illocutionary layer houses those elements that specify and evaluate the form of the utterance itself. It should be noted at this point that the specifications and modifications discussed here can be expressed both grammatically – by making use of *operators* (e.g. usage of the past tense locates an event in the past) (Dik 1997a:51) – and lexically – by making use of satellites (e.g. addition of a Time satellite such as *yesterday* specifies a time frame in the
A definition of complex beginnings

Rhetorical satellites [clause]

Illocutionary satellites [illocution]

Propositional satellites [proposition]

Predicational satellites [predication]

Predicate satellites [predicate] [terms]

Rhetorical level

Interpersonal level

Representational level

Figure 2.2: simplified representation of the hierarchical structure of the clause

generic past indicated by the past tense) (ibid). Since this study is exclusively concerned with satellites, I will not further comment on the use of operators.

Consider the following, fabricated, sentence, as an illustration of how satellites function within the layered model:

(1) However, to put it bluntly, obviously you must have been driving recklessly YESTERDAY.

The predicate drive is modified by the predicate satellite recklessly (Dik et al. 1990:26; predicate satellites are roughly equivalent to Quirk et al.’s predicate adjuncts [1985:613]). Recklessly is a predicate satellite since it actually changes the internal structure of the event: just ‘driving’ denotes a different sort of event than ‘driving recklessly’ (Dik et al. 1990:30, Dik 1997a:226). This predicate then combines with the argument you into the
core predication drive recklessly (you) and this core predication is located on a time axis by the predication satellite yesterday (Dik et al. 1990:32, Dik 1997a:243). The result is an extended predication. In other words, at the representational layer the huge set of driving events is narrowed down to one specific type of driving event, namely reckless driving, and from this still relatively large set of reckless driving events one single one is selected, namely the one carried out by a specific person (you), at a specific time (yesterday). Now that the actual event the speaker wants to present has been identified, she can add her evaluations of its truth. In this particular case, she does this by adding the propositional satellite obviously. She then continues with evaluating the way she formulates her statement and in her own words, she puts it bluntly. Finally, the rhetorical satellite however identifies the relation between the utterance at hand and the surrounding discourse.

An important principle that is at work in this layered model is the principle of scope. In FG it is assumed that elements that function at a specific level scope over all elements that function at lower levels. For satellites this means that rhetorical satellites scope over illocutions, which are entities that consist of illocutionary satellites and propositions (see Figure 2.2). Illocutionary satellites scope over propositions – which consist of propositional satellites and extended predications – and propositional satellites, in their turn, scope over extended predications – which consist of predicational satellites and core predications. Predication satellites then scope over core predications – consisting of nuclear predications and predicate satellites – and predicate satellites, finally, scope over the nuclear predicate. According to Hengeveld, the strongest piece of evidence for the scope relations in this internal classification of adverbials comes from the order in which adverbials appear in languages. He states that if “the main predicate of a sentence is taken as the center, adverbs may be said to orient themselves towards this center in such a way that the scope relations between them are matched by their order with respect to the center” (1997:134) (see also Dik 1997a:401). Consider his example:

(2) Finally [rhet], your mother honestly [ill] probably [prop] has been slandering terribly [predicate] again [predicational]. (1997:134)

Note that Hengeveld concedes that adverbs with a deictic component (such as here and tomorrow) seem to behave much more freely than other adverbs with regard to the position they may occupy. However, he does
not give an explanation for this relative freedom. Following Siewierska (1992), he furthermore notes that within the satellite subclasses there may be more specific ordering constraints.

To summarize, in FG the notion ‘degree of integration into the clause’ is conceived of as the rung of the layer that is modified by the adverbial. Predicate satellites modify the lowest layer in the lowest level and are therefore most integrated into the clause. Rhetorical satellites modify the highest level and are therefore least integrated into the clause. Since further chapters will draw heavily on FG for the analysis of complex beginnings, the adverbial property ‘degree of integration into the clause’ will be replaced by the FG-label ‘layer modification’.

To complete our discussion of functional theories, SFG’s theoretical underpinning of the categorization of adverbials into Experiential, Interpersonal and Textual Adjuncts will be discussed by comparing it to FG’s clause model. The distinction between the rhetorical, interpersonal and representational function of the clause is a feature that SFG shares with FG. In SFG these different functions of the clause are called metafunctions. FG’s rhetorical level corresponds to SFG’s Textual metafunction; FG’s interpersonal level corresponds to SFG’s Interpersonal metafunction and FG’s representational level corresponds to SFG’s Experiential metafunction. In contrast to FG, however, SFG does not assume a hierarchical relation between these structures, but rather conceptualizes them as parallel functions (Halliday 1979:61, Butler 1996:14). This view is not entirely accepted in SFG, however. Gómez-González (1998), for instance, suggests that SFG should adopt a scopal relationship between the three metafunctions and she points out that Halliday himself in fact hints at such an organization on several occasions (1998:103). Interestingly, she formulates her suggestion after examining various combinations of sentence-initial elements, some of which could be classified as complex beginnings; her findings will be further discussed in Section 2.4 and later in Chapters 4 and 5.

Now that the concept of hierarchical classification is clear, we can make a start with delineating the satellite classes at the bottom end (predicate satellites) and at the top end (rhetorical satellites) of the hierarchy from all non-satellites. Starting at the bottom end, with predicate satellites, a major problem is obviously the distinction between arguments (obligatory adverbials) and satellites (optional adverbials). Consider the sentence in (3a) for an example of the tension between these two classes:
a From Chaplin, when they finally settled the divorce in 1942, she received the equivalent today of 17 million dollars. [NEC 80-236]

b When they finally settled the divorce in 1942, she received the equivalent today of 17 million dollars.

Semantically speaking, From Chaplin specifies a participant in the receiving event (namely ‘the source’) and that suggests that it should be analyzed as an argument rather than as a satellite. At the same time, however, receive (much more than a predicate such as give) tends to be used as a two-place predicate, in which only ‘the receiver’ and ‘the object-received’ function as arguments (as in I received this letter in the mail this morning or He received more of the blame than anyone when the plan failed to work [Sinclair et al. 1995:1375]). This rather suggests an analysis as satellite, because it is not obligatory to mention the source-participant, and this makes specification of the source ‘additional’ information. From a grammatical point of view, furthermore, From Chaplin is also optional, since deletion – as (3b) shows – still yields a grammatically acceptable sentence. The grammatical criterion tipped the balance: for the purposes of this study the sentence in (3) was considered to start with a complex beginning.

With regard to the type of example in (3), a decision either way would not have had a lot of impact. As a direct result of the fact that predicate satellites are among the least mobile of all satellites (Quirk et al. 1985:613, 650-1, Sinclair 1990:429, Greenbaum 1996:148), they seldom occur in sentence-initial position, let alone in combination with another satellite. The demarcation process at the top end of the hierarchy, on the other hand, has a much larger impact since it involves many more elements. A much-cited controversy in this regard relates to the class of rhetorical satellites itself. Many linguists include these in their class of adverbials, but others treat them as a separate class of, for instance, half-conjunctions (see Greenbaum 1969:2 for an overview, and also Wales 1989:12). As we saw above, within FG Hengeveld (1989:151, 1990:13) argues that they should indeed be considered satellites at a rhetorical level, while Dik prefers to classify them as Connectors (1997b:440), which puts them in a class along with conjunctions such as and, but, or, so, etc. This study focuses on discourse functions of complex beginnings, and as a result Conjuncts are considered to be satellites. The most
important argument for this is that, just like other satellites, the majority of the rhetorical satellites enjoy a certain amount of freedom with regard to their position in the sentence, a freedom that regular conjunctions lack. When a Conjunct such as *for example* ends up in initial position rather than anywhere else in the sentence, this is the result of a choice of the language producer and this choice may be discourse-driven. As such they are of interest for the study of complex beginnings (see also Fries 1983:119).

The next step now is to draw a line between rhetorical satellites (‘Conjuncts’) and conjunctions. Elements that are often cited as “blurring the borderline” (Biber et al. 1999:80) are *so* and *yet*, in their causative and adversative sense respectively. Quirk et al. (1985:443) still classify *yet* as a conjunct, but Greenbaum (1996:383) and Sinclair et al. (1997:1947) opt for a classification as ‘half-conjunction’ or ‘coordinating conjunction’ respectively. The reason for the iffy status of *yet* and *so* is that unlike other *conjuncts* they are fixed at the clause boundary, but unlike other *conjunctions* they can be preceded by another conjunction (e.g. *and yet*, *and so*). In this study the fixed position-criterion tipped the balance, and as a result initial combinations of an adverbial with *yet* or *so* are not considered complex beginnings.

A further exclusion concerned sets of correlative constructions, including *if-then*, *as-so*, *once-now*, all exemplified below:

(4) a If the weather is good, then we will go on an outing. [NEC]
   b As the oxygen falls away, and the brain activity goes up and up, so this bright bit in the middle will get bigger, and you feel as if of rushing through a tunnel towards a bright light. [NEC]
   c Where once Morley people produced, now they shop. [NEC]

With regard to *if-then* clauses, Dancygier and Sweetser (1992:118) have argued that *then* should not be considered the second half of a correlative subordinating conjunction (as Leech and Svartvik 1992:832 do). In their view *then* adds its own semantic function to the argument structure of the two clauses and it should therefore be considered an adverbial in its own right. They support their claim by showing that sometimes the addition of *then* yields an unacceptable sentence:

(5) a If you need any help my name is Suzan.
   b *If you need any help then my name is Suzan.*
As Dancygier and Sweetser remark, sentence (5b) may cause the addressee to ask what Suzan’s name is if he does not need any help (1992:118).

However, the sentence in (5a) cannot be interpreted causally in the first place, and the fact that then cannot be added to such a sentence does not inherently imply that it adds its own semantic orientation. Consider the following sentences, which are also discussed by Sweetser and Dancygier:

(6) a If it is humid, then the TV will work.
   b *If it is humid, the TV will work.

The sentence in (6a) can only be interpreted as ‘the TV will only work if it is humid’. The sentence in (6b) allows the interpretation that the working of the TV will not be affected by humidity (as in the TV will work nevertheless), but the causal interpretation of (6a) is also present in this structure. As a result, insertion of then in this sentence does not add a causal interpretation; it merely restricts the set of possible interpretations by identifying one – the causal one – as the one that was intended (Mikael Svensson; pc). Consequently, this study also considers if-then combinations correlative constructions in this study and they are not included in the data set. Note that sentence-initial conditional clauses that occur in combination with other initial adverbials do count as complex beginnings.

The final two exclusions from the set of satellites are of a completely different nature. They concern the extra-clausal category of vocatives such as in (7) and S-V phrases, such as in (8), that from a functional perspective may well be considered adverbials:

(7) Listen, honey, Nicole Brown Simpson won’t ever decompose!

(8) However, I think Andre is very good for tennis and not just because he is such a wonderful player. (Quirk et al. 1985:779).

As long as they are separated from the clause by a break in the intonation pattern, Quirk et al. (1985:779) and Auer (1996:321) consider elements such as I think in (8) to be adverbials (see also Wichmann 2001:183 and Biber et al. 1999). Auer’s reason is that these elements have reached such
A definition of complex beginnings

a phase of grammaticalization that they can be considered orientational elements on a par with their corresponding adverbials (in my opinion). To prevent complications, however, this study will only be concerned with elements that in a grammatical sense, too, can be considered adverbials.

2.3 Two or more adverbials

The second notion in the definition of complex beginnings that needs clarification is the idea that a complex beginning consists of two or more adverbials. This means that for each initial adverbial string it needs to be established whether or not it consists of only one complex adverbial, or two or more independent adverbials that together form one complex beginning. This issue is mainly relevant when two adverbial strings of the predicational level are concatenated. Consider for instance the sentence in (9a):

(9) a In the 18th century, supposedly a period of total darkness, sentencing authorities had a wide choice.

b *Supposedly a period of total darkness, sentencing authorities had a wide choice.

The second element, supposedly a period of total darkness, is tied to In the 18th century. If In the 18th century is deleted, the sentence becomes ungrammatical, because – as sentence (9b) shows – supposedly a period of total darkness cannot independently provide an orientation for the subsequent message. As a result, the two should be analyzed as one complex adverbial rather than two separate adverbials forming one complex beginning.

The deletion test applied to (9) is not fool-proof, however. While all independently functioning adverbials in second initial position of a complex beginning can also function in isolation, it is not the case that all adverbials that may also function in isolation in fact constitute the second part of a complex beginning. Consider the following examples as illustrations for this (see also Van Hoorick 1994:19):

(10) a In a muddy field near Vukovar they are investigating a war crime. [NEC]

b Near Vukovar they are investigating a war crime.
In sentences such as in (10a), both *In a muddy field* and *near Vukovar* fulfill the semantic role of ‘place’ and they are not separated from each other by a comma. Although *near Vukovar* could function independently (i.e. *Near Vukovar they are investigating a war crime*), it is analyzed as an adjunct that is placed in the post-modifying area of *a muddy field*. The result is one complex adverbial, rather than two individual adverbials forming a complex beginning. Such constructions are not considered complex beginnings in this study.

In principle, a similar case could be made for the examples in (11):

(11) a And **three years ago in France** Don and I had a very bad car crash. [NEC 72-224]

b **In the dressing room afterwards** everyone is too tired to talk. [NEC 148-367]

Although both parts of the complex beginning fulfill different semantic functions (TIME and PLACE), there are strong indications supporting an analysis of combinations of spatial and temporal adverbials as just one constituent. The most important one is that in the human mind, time and location are intrinsically connected to each other, in the sense that as soon as an event is anchored on a temporal axis it is simultaneously anchored on a spatial one as well. Ian Watt, in his account of the early history of the novel, formulates it as follows:

> In the present context, as in many others, space is the necessary correlative of time. Logically the individual, particular case is defined by reference to two co-ordinates, space and time. Psychologically, as Coleridge pointed out, our idea of time is ‘always blended with the idea of space (biographa literaria, ed. Shawcross (London 1907), I, 87). The two dimensions indeed are for many practicable purposes inseparable, as is suggested by the fact that the words “present” and “minute” can refer to either dimension; while introspection shows that we cannot easily visualise any particular moment of existence without setting it in its spatial context also.” (1987:26)

However, due to the fact that the sentences in (11) do present different semantic functions and that the relative order of these different functions may be discourse-driven (TIME-PLACE or PLACE-TIME), this type of adverbial combination is considered to be a complex beginning.
The last construction that needs to be looked at concerns temporal and spatial elements followed by what is traditionally referred to as non-restrictive relative clauses: when and where clauses. In some cases this study will consider such relative clauses to be independently functioning adverbials. This initially seems to go against all previously established criteria. In the first place, relative clauses cannot be automatically considered adverbials. In the second place, relative clauses seem as tied to a position that follows the antecedent of the head as yet and so are tied to first initial position; and for those last elements the minimal mobility was a reason for exclusion (see also Hartnett 1995:198). In the third place, finally, non-restrictive relative clauses inherently modify another phrase, and in most cases they can be analyzed as one unit in combination with that phrase. However, the arguments supporting inclusion are stronger:

The first argument for inclusion of these combinations is based on the observation that clauses starting with when and where do not necessarily realize non-restrictive relative clauses. In this respect when and where clauses have a status that differs somewhat from true relative clauses introduced by that, which, who, whom and whose. The latter are always tied to a referent, but when and where clauses can appear without a referent as well. When encountered in isolation they are analyzed as finite adverbial clauses on a par with adverbial clauses introduced by for instance while and after. They then realize circumstance or condition. This status aparte of temporal and spatial relatives is recognized in descriptive grammars which invariably begin their treatment of relative clauses with a presentation of that, which, who, whom and whose clauses and which only in a later stage introduce when and where clauses (Sinclair 1991:363,367, Greenbaum 1996:225,227; see for an analysis of classification of relative clauses Tottie and Lehmann 1999).

The second argument results from the observation that, unlike relative clauses that cannot appear without a referent, when and where clauses are flexible with regard to their position in the sentence. Although they may be preferred in a position following another temporal or spatial element, they can easily precede these elements, as is shown by the example in (12):

(12)  **When the tribe first made contact with civilisation, in the Eighties,** it was revealed that they carry a strain of a virus known to cause leukaemia. [NEC 121-333]
This means that if a *when* or *where* clause appears in second initial position, this is by choice (a conventional choice, but still a choice) of the language producer. The first initial position is in principle also available for this constituent.

To illustrate a further argument, consider the example in (13):

(13) **Years ago,** *when we ran around painted with woad,* these jollities turned into orgies. [NEC 2-1]

While *when we ran around painted with woad* does modify *Years ago,* it also has a causal orientation with regard to the *jollities* that *turned into orgies.* As a result it adds a separate causal orientation to the clause, which was not already present in the temporal orientation provided by *Years ago.* The *when* clause can therefore not be simply considered to be an additional temporal orientation.

A final argument that supports inclusion of non-restrictive relative clauses of time and place in the category of satellites is provided by Verhagen (1996, 1997) and Schilperoord and Verhagen (1998). They show that, in contrast to restrictive relative clauses, non-restrictive relative clauses should be considered as independent text segments (Schilperoord and Verhagen 1998:153). Their main reason is that these clauses are “not an integral part of the conceptualized event of the matrix [clause]” (Schilperoord en Verhagen 1998:149). As a result, these clauses fulfill functions that are ‘adverbial-like’ (Daalder 1989:202); that is, functions that are similar to those of other adverbial clauses (Schilperoord en Verhagen 1998:153). These arguments together warrant the inclusion of complex beginnings containing non-restrictive relative adverbials in second position.

### 2.4 Two or more adverbials in sentence-initial position

When we say that complex beginnings are combinations of two or more adverbials in sentence-initial position, it needs to be established exactly where we take sentence-initial position to begin and where it ends. Although in itself this is not such a complicated undertaking, this section will show that it reveals interesting consequences with regard to the functional tools that FG and SFG have available for analysis of sentence-initial constituents.
For practical reasons, this study takes orthographical sentences as its basic unit of analysis and sentence-initial position is considered to begin therefore with the first capitalized word of a sentence. Since it is only adverbial combinations that this study is interested in, sentence-initial position will be defined as extending up to but not including the first obligatory element of the clause (Biber et al. 1999:771). For English declarative sentences this is generally the grammatical Subject (see also Quirk et al. 1985:491, Virtanen 1992:15); for Dutch it is the finite verb form. In the sentences in (14), all elements in italics are considered to be in sentence-initial position; the underlined element represents the first obligatory element of the clause:

(14) a And indeed, for a time this is exactly what did seem to be happening. [NEC 20-126]
   b Anders gezegd, opnieuw is het morele gehalte van het Amerikaanse buitenlandse beleid in het geding [NDC 11-3]
In other words, again is the moral value of America’s foreign policy at stake.6

Notice that when sentence-initial position is said to start with the first capitalized word, this does not necessarily mean that this first word is the first element of the complex beginning, as well. When the sentence starts with a conjunction, a vocative, or a continuative, followed by two adverbials, then these adverbials are still considered to form a complex beginning in sentence-initial position. The preceding elements are not included in the complex beginning (which is not to say that these elements do not provide an orientation to the sentence). The left-most adverbial in a complex beginning will be referred to as being in absolute initial position or in first initial position. The other adverbials are in second, third, etc. initial position (cf. Pardoen 1998, Virtanen 1992:21, see also Jacobson 1964:61).

Earlier it was stated how all elements in a complex beginning provide an orientation to the message that they introduce and how they all play a role in the organization of the discourse. This raises the question whether or not all elements of all types of complex beginnings should be analyzed as belonging to the same functional unit, namely the orientation of the sentence. Or more generally speaking, it raises the question of how the structures of complex beginnings map on the structures that
functional linguistic theories suggest for the sentence-initial area. Without committing to the idea that it would be most desirable if a complex beginning as a whole is analyzed as belonging to the same functional unit, it will be shown below that neither the dominant interpretation of the sentence-initial functional constituent in SFG (Theme) nor the interpretation of the sentence-initial functional slots in FG (P2 and P1) unambiguously permit such an analysis. The question that can be raised then is whether the current structures are sophisticated enough to do justice to the ways complex beginnings may operate. Consider first an SFG analysis of the two complex beginnings in (15):

(15) a Of course, today things are vastly different.
    b Today, of course, things are vastly different.

In SFG, the Experiential metafunction is realized by a Theme and a Rheme. The Theme is, according to Halliday, not only the “point of departure of the message” but it also expresses that “with which the clause is concerned” (1994:37). In English it is realized sentence-initially and, in Halliday’s interpretation, it contains one and only one experiential element. In other words, the Theme of a clause ends with the first constituent that is either participant, circumstance or process (ibid:52). This element is called the Topical Theme. All material that is to the right of this element then falls in the Rheme of the sentence: “the part in which the Theme is developed” (ibid:38). In both (15a) and (15b), today is the first topical element and this means that, according to this definition, in (15a) the complex beginning as a whole is analyzed as Theme, while in (15b) only Today receives Thematic status; of course ends up in the Rheme.

Two points should be noted about this Theme/Rheme analysis. Firstly, the complex beginning in (15b) is distributed over two functional units and they are therefore assigned a different functionality. As we shall see in Chapters 4 and 5, such a distributional analysis is particularly problematic for an order in which an adverbial that modifies a lower clause layer is followed by an adverbial that modifies a higher clause layer (i.e. representational-interpersonal, representational-rhetorical, interpersonal-rhetorical orders). The second point goes for both (15a) and (15b) and has been raised for similar examples by Downing (1991). If the first experiential element marks the end of the Theme and the Theme realizes that ‘with which the clause is concerned’, then we are forced to
interpret (15a) as being mainly concerned with today and (15b) with Of course, today rather than with things. This means that the element that functions as an orientation to the clause is at the same time analyzed as its main point. As a remedy, Downing (1991:122) suggests that Adjuncts should not be analyzed as Topical Themes at all (1991:126), but that they rather should be considered to realize situational Themes, which set up circumstantial frameworks (Downing 1991:128, see also Chafe 1976:50), and which are to help the interpreter orient himself. In this interpretation the Theme does not extend to the first experiential element, but to the first experiential element that actually functions as a topic. In English declarative sentences, this is often the Subject (see also Vande Kopple 1986).

In addition to Downing’s suggestion for an extended Theme, Berry (1996:29ff) presents a set of four more proposals to extend the Theme, varying from an extension that includes in the Theme the Subject and all elements that precede this Subject, to a proposal that includes in the Theme the lexical verb and all elements that precede this lexical verb. A further proposal discussed in Berry (1996) suggests that Theme and Rheme should be considered non-discrete classes on a continuum, and according to a final proposal Theme and Rheme are discrete classes (i.e. it is possible to say where Theme ends and where Rheme begins) while they may still overlap (i.e. when Rheme begins, Theme has not necessarily ended yet). An additional interpretation, published after Berry’s overview, is from Gómez-González (1998). She suggests an Extended Theme which includes Topical Theme in Halliday’s sense but which also includes all pre-topical and post-topical textual and/or interpersonal elements (Gómez-González 1998).7 An advantage of all of these extension proposals is that they ensure that complex beginnings are analyzed within the same functional constituent, and all elements in a complex beginning can then safely carry orientational functionality. A further advantage of Downing’s suggestion in particular, is that she hints at ‘two starting points’, the first one an orientation, the second a topic. Intuitively this seems an attractive idea where complex beginnings are concerned and it can be further explored with the help of the functional sentence pattern as developed within FG.

FG’s description of the sentence-initial area revolves around the distinction between intra-clausal and extra-clausal elements and their different functionality. Typically, the basic functional pattern established
for an English declarative sentence is as in (16) (see Auer 1996:295 and Hasereyn et al. 1997:1228ff for similar functional patterns).

(16)  $P_2, P_1 S V, V, O X, P_3$.

The functional slots labeled $P_2$ and $P_3$ are for extra-clausal elements (henceforth ECCs) which facilitate functions such as interaction management, attitude specification, discourse organization and discourse execution (Dik 1997b:384). For the present discussion, discourse organizational functions are the most relevant, since one of its sub-functions is Orientation (Dik 1997:388). The functional slot $P_1$ houses intra-clausal elements, and in declarative main clauses it is typically filled by constituents carrying Topic (Given Topic or SubTopic) or Focus function (Dik 1997a:403, 421). The number of elements that can be housed in $P_1$ is restricted to one; there are no references in the literature to any restrictions placed on the number of elements in $P_2$. It is easy to see how this extra-clausal/intra-clausal analysis provides both an orientational ($P_2$) and a topical ($P_1$) starting point.

Several problems remain, however. First consider the sentences in (15) again:

(15)  

a  Of course, today things are vastly different.

b  Today, of course, things are vastly different.

In (15a) Of course is generally considered to be in $P_2$, while today is in $P_1$. This means that in an FG analysis, in contrast to an SFG analysis, it is the complex beginning in (15a) that is divided over two functional slots. As will become clear in Chapter 5, this is less problematic than when an analysis separates the two parts of the complex beginning in (15b). With regard to the complex beginning in (15b), the FG model is ambiguous, however, and analysis of this sentence reveals a much more fundamental problem regarding the FG-model.

While the propositional satellite of course is again an extra-clausal element (and therefore, placed in $P_2$), for today it cannot be established whether it is in $P_1$ or $P_2$. It is not clear whether it is separated from the clause proper, because it is not clear if the comma only serves to set off the parenthetical element of course, or whether it also functions to set off today (apart from this, it is not at all clear whether the presence of a comma can be considered an adequate measure for distinction between
extra- and intra-clausal [cf. Mackenzie and Keizer 1991, but also Quirk et al. 1985:161]). Other criteria that have been formulated to distinguish ECCs from intra-clausal elements are not helpful in this respect either. While grammatical criteria such as ‘ECCs are never essential to the internal structure of the clause’ (Dik 1997b:381) can distinguish between ECCs and obligatory clause elements, they obviously cannot distinguish between ECCs and satellites, since satellites are by definition not essential to the internal structure of the clause either. Furthermore, functionally speaking, ECCs are seen as helping organize the discourse. Again, since sentence-initial predicational satellites always provide an orientation to the clause (regardless of their being internal or external to the clause) and since, by virtue of being in initial position, they always help fit the clause into its context, they, too, help organize the discourse. This means that for the sentence in (15b) we cannot decide whether the complex beginning as a whole ends up in P2 or whether its two parts are divided over two functional slots again. Consider as a further illustration of this last problem the example in (17):

(17) **On the St Petersburg waterfront, if you don’t pay off the right people**, you may find that the crane operator will drop your cargo in the water. [NEC 27-138]

As Hannay (2001) has pointed out, the classification of **On the St Petersburg waterfront** is ambiguous. The initial element in this sentence is an example of a spatial setting as discussed by Dik (1997b:396f) and its function is therefore similar to that of the Theme. As a result it may be considered to be in P2. On another view, however, it is simply a predicational space adjunct in P1 and the subordinate clause is a parenthetical element. In both cases, however, the initial adverbial provides an orientation to the *if* clause and the main clause that follow and the question may be raised how valid the functional distinction between P1 and P2 in reality is. Chapter 5 will return to this issue.

### 2.5 Examples of complex beginnings

This chapter has been concerned with establishing exactly which constructions are considered complex beginnings and which not. In conclusion, the examples in (18) will provide some further illustrations of complex beginnings:
(18) a **Significantly, however**, he would continue to interpret the behaviour of those around him by his own standards, regarding it as 'odd', 'weird' or even 'unBritish'. [NEC 2-10]  

b **Objectively, of course**, this is nonsense. [NEC 163-389]  
c **Once the debate is over**, once Ken Clarke has announced our Budget proposals, we Conservatives must work together and take that message to the country. [NEC 31-149]  
d **Still**, if Nigeria succeeds in overturning the coup and establishing some order in rural Sierra Leone, Abach will have every right to claim credit for restoring democracy to a beleaguered neighbor. [NEC 15-115]  
e **For surely, of all the men I've ever known**, he was the least enslaved by passion. [NEC 4-28]  
f **Though living on an island created a sense of separateness from other nations, in actual fact** the nation of England was from the start of mixed origin and thereafter readily absorbed and assimilated further additions to the mixture. [NEC 216-473]  
g **After all, when society suddenly saw fit to decree that sexual acts for which over many centuries people were sent to prison (or worse) in this world, and to hell in the next were now to be regarded not only as legal but perfectly acceptable, surely** this was bound to suggest that lots of other anti-social acts could now be committed with equal impunity. [NEC 10-20]  
h **Curiously, while the council is saying no more than that it will fight the case vigorously, around the town hall the boy is recalled as being dispatched to a school for children with behavioural, not learning problems.** [NEC 20-102]  
i **Now, however, with typical boldness**, he has put his head above the parapet once more. [NEC 32-220]  

Notes

For some years, FG-expansion into the discourse domain was approached from two different perspectives. In Hannay and Bolkestein (1998), the one is referred to as the modular approach (Kroon 1997), while the other is labelled
the upward layering approach (Hengeveld 1997). This last approach is the one referred to in this study.

2 To avoid distraction from the classification of satellites, the layered model of the clause as represented in Figure 2.2 is considerably simplified. It ignores, for example, discussions about the entity the clause refers to (speech act/speech product) (Bolkestein 1992:390) and about whether or not extralinguistic entities such as Speaker and Addressee should be included in a representation of the clause (Hengeveld 1989, Bolkestein 1992, Dik 1997a).

3 Notice that this bottom-up description of the production of an utterance does not presume psycholinguistic reality. In fact, as Levelt (1989) shows, the speech process is most likely a top-down process, and in FG’s youngest model (Hengeveld 2002) such a top-down approach is taken as a starting point.

4 Compare a construction with an ‘anonymous’ source in the frame of give. Such a sentence would only be grammatical, when a generic They is introduced, as in ‘They gave him all this money’ or when the language producer resorts to a passive construction. Notice, also, that for give it is a lot easier to leave either the receiver or the gift or even both unnamed.

5 Note that their proposal encompasses all non-restrictive relative clauses, but since relative clauses introduced by that, which, who, etc. will have an argument (rather than an adverbial) as antecedent, a combination of such clauses and the preceding element can never form a complex beginning, and they are therefore not of interest for this study.

6 Unless indicated otherwise, in this and other chapters translations of Dutch examples are mine.

7 Notice that in this proposal, too, Today, of course, is supposed to represent that with which the clause is concerned.
3

The internal order of complex beginnings

3.1 Introduction
This chapter will make a start with addressing the first research question of the list given in the opening chapter, namely “What types of complex beginnings occur in English?” It will do this by analyzing the internal order of adverbials in 527 complex beginnings collected from a corpus of English texts. The analysis will initially be based on the three properties of adverbials that are used to formulate ordering principles in the literature, namely ‘syntactic realization’, ‘semantic function’ and ‘layer modification’. This discussion will pave the way for a new typology of complex beginnings, to be presented in Chapter 4.

In this chapter, Section 3.2 will describe the corpus from which the examples were collected. Sections 3.3 through 3.5 will each investigate one of the ordering principles mentioned above. Section 3.6, finally, will summarize.

3.2 The Native English Corpus (NEC)
The Native English Corpus (henceforth NEC) was especially compiled for this study and contains almost 500,000 words drawn from (1) newspapers and magazines (News subcorpus), (2) academic texts (Academic subcorpus) and (3) works of fiction (Fiction subcorpus) (see Table 3.1a). All texts were produced by native speakers of English who are expert writers and, presumably, they were edited before they were published. Most newspaper texts were produced by British speakers of English; the majority of the texts in the other sources was produced by American speakers of English. Since one of the objects of this study is a comparison between learner and native complex beginnings, the three types of sources and the number of words drawn from each source were based on characteristics of the texts that were already available for the Learner English Corpus (type, topic and length), to be discussed in Chapter 6. The News subcorpus only includes integral texts; the
### Table 3.1a: Text Statistics Native English Corpus (NEC)

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### Table 3.1b: Complex beginnings in the Native English Corpus (NEC)

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<th>&gt;2 adv.</th>
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<td>Academic</td>
<td>73</td>
<td>2</td>
<td>75</td>
<td>1.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Fiction</td>
<td>45</td>
<td>7</td>
<td>52</td>
<td>1.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>496</td>
<td>31</td>
<td>527</td>
<td>1.1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Academic and Fiction subcorpora also include segments of texts such as chapters. To complete the description, the texts in the News subcorpus were electronically available, but not tagged; the Academic and Fiction subcorpora were neither.

As Table 3.1b shows, the NEC yielded 527 complex beginnings in total, of which almost 95% (n=496) consisted of two adverbials. The remaining 5% consisted of three adverbials. No complex beginning contained more than three adverbials, but some were preceded by a conjunction, a vocative, or a continuative element (see Section 2.3). None
of the subcorpora contain more complex beginnings per 1000 words than any of the other subcorpora ($p=.24$), but the Academic subcorpus does contain more complex beginnings per 100 sentences ($p=0.04$). This is a result of the fact that academic texts contain more words per sentence than the other two subcorpora.

<table>
<thead>
<tr>
<th></th>
<th>texts</th>
<th>sentences</th>
<th>words</th>
<th>words/sent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Mail</td>
<td>81</td>
<td>8817</td>
<td>159654</td>
<td>18.1</td>
</tr>
<tr>
<td>Daily Telegraph</td>
<td>58</td>
<td>5574</td>
<td>103667</td>
<td>18.6</td>
</tr>
<tr>
<td>Independent</td>
<td>69</td>
<td>7430</td>
<td>133740</td>
<td>18.0</td>
</tr>
<tr>
<td>Magazines</td>
<td>4</td>
<td>399</td>
<td>7900</td>
<td>19.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>212</strong></td>
<td><strong>22220</strong></td>
<td><strong>404961</strong></td>
<td><strong>18.2</strong></td>
</tr>
</tbody>
</table>

Table 3.2a: Text statistics Newspaper subcorpus

<table>
<thead>
<tr>
<th></th>
<th>2 adv.</th>
<th>&gt;2 adv.</th>
<th>total</th>
<th>per 1000 words</th>
<th>per 100 sent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Mail</td>
<td>153</td>
<td>9</td>
<td>162</td>
<td>1.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Daily Telegraph</td>
<td>101</td>
<td>4</td>
<td>105</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Independent</td>
<td>114</td>
<td>9</td>
<td>126</td>
<td>.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Magazines</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>1.3</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>378</strong></td>
<td><strong>22</strong></td>
<td><strong>400</strong></td>
<td><strong>1.0</strong></td>
<td><strong>1.8</strong></td>
</tr>
</tbody>
</table>

Table 3.2b: Complex beginnings in the Newspaper subcorpus
Since the Newspaper subcorpus contributes the bulk of the examples it is interesting to examine whether there are differences to be observed between the four newspaper sources of this subcorpus (see for instance Clyne [1985:79ff], who found differences in the number of complex constructions and sentence length between various German newspapers). However, although texts from magazines contain longer sentences \((p=.04)\), none of the corpora contain more complex beginnings per 1000 words or per 100 sentences than any of the others \((p=.53 \text{ and } p=.40,\) respectively) (see Table 3.2a and 3.2b).

Whenever any of the parameters discussed in Sections 3.2 through 3.4 reveal significant differences between the subcorpora, these will be pointed out. Where no references to the subcorpora are made, it may be assumed that the differences that were encountered were not significant. Furthermore, it should be noted that all statistics discussed in the rest of this chapter only refer to the 496 complex beginnings that consist of two adverbials. For practical reasons the 31 complex beginnings containing more than two adverbials will be discussed separately in Chapter 4.

### 3.3 Syntactic realization

Of the three characteristics that are assumed to influence the relative order of adverbials, syntactic realization is generally considered to be the least influential factor (e.g. Jacobson 1964:70). Nevertheless, Quirk et al. (1985:565) based one of their ordering principles for adverbial clustering on syntactic realization. They observed that, in general, “adverb phrases precede noun phrases, which precede prepositional phrases, which precede nonfinite clauses, which precede finite clauses” (1985:565). Two things should be noted about this ordering principle.

Firstly, no explanation is provided for why this order should be so. It is merely reported as an observation drawn from the Survey of English Usage. However, the why for this order is especially intriguing since this particular order holds that shorter adverbials (adverb phrases, noun phrases and prepositional phrases) precede longer adverbials (finite and nonfinite clauses). In other words, it reserves absolute initial position, which is the most peripheral position, for short adverbials, rather than longer adverbials. This is in contrast with the idea that it is clauses that tend to be placed in most peripheral position (Sinclair 1990:344, Mackenzie 1997:174; but see also Jacobson 1964:95, who finds more clauses in second initial position than in first initial position, and
Gustaffson 1983:13, who finds that by far the majority of absolute initial adverbials are non-clausal).

Secondly, on a more general note, it is not clear what the status of this ordering principle is. Can it, for instance, overrule other ordering principles? Or is it only considered to apply in situations in which other ordering principles leave matters undecided (since this one is considered least influential)? Or is it simply the case that the results of this ordering principle show a high correlation with the results of other principles? Consider, for instance, the example in (1) in which the FG-ordering principle based on layer modification (rhetorical precedes representational) coincides with the ordering principle of syntactic realization as formulated above (adverbs precede prepositional phrases):

(1) However, for a short book it is laborious and the arguments are not finally convincing either. [NEC 202-59]

Elaborating on these considerations is, however, only useful when the syntactic order hypothesized above in fact accurately predicts the relative order of adverbials in complex beginnings. Consider, therefore, all syntactic realizations that Quirk et al. encountered, and according to which the adverbials in the 496 complex beginnings were classified (1985:489):

(2) **Adverb phrase**
   She telephoned *just then*. (closed class)
   She telephoned *very recently*. (open class)

(3) **Noun phrase**
   She telephoned *last week*.

(4) **Prepositional phrase**
   She telephoned *in the evening*.

(5) **Nonfinite clause**
   She telephoned *while waiting for the plane*. (present participle introduced by preposition)
   She telephoned, *hoping for a job*. (bare present participle)
   She telephoned *to ask for an interview*. (to-infinitive)
   She telephoned, *angered at the delay*. (past participle)
   She telephoned, *though obviously ill*. (verbless clause)

(6) **Finite clause**
   She telephoned *after she had seen the announcement*. 
Notice that in this study adverbials such as *of course, at all, for example, in fact*, etc. are considered adverb phrases, rather than prepositional phrases, due to the fact that they do not allow expansion and can be considered fixed phrases (Greenbaum 1996:146; however, see also Biber et al. [1999:768] who consider such elements prepositional phrases, although they do point out that they are more or less fixed expressions).

Table 3.3 shows the relative order of all syntactic realizations in complex beginnings as encountered in the NEC:

<table>
<thead>
<tr>
<th>in percentages</th>
<th>sum = 23%</th>
<th>sum = 55%</th>
<th>2nd initial position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>adverb phrase</td>
<td>noun phrase</td>
<td>prepos phrase</td>
</tr>
<tr>
<td>1st initial pos.</td>
<td>11.1</td>
<td>1.4</td>
<td>24.0</td>
</tr>
<tr>
<td>noun phrase</td>
<td>.4</td>
<td>.2</td>
<td>1.8</td>
</tr>
<tr>
<td>prepos. phrase</td>
<td>9.7</td>
<td>.8</td>
<td>8.9</td>
</tr>
<tr>
<td>nonfinite clauses</td>
<td>1.2</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>finite clause</td>
<td>3.8</td>
<td>.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>26.2</td>
<td>2.8</td>
<td>39.1</td>
</tr>
</tbody>
</table>

Table 3.3: Relative order of syntactic realization in complex beginnings (NEC)

The first thing that should be noticed is that almost all combinations occur. That means that for almost every particular syntactic order the reverse order is possible as well, which basically rules out syntactic realization as an accurate predictor of internal order in complex beginnings. On the other hand, the majority of the combinations – namely those above the diagonal in Table 3.3 – do follow Quirk et al.’s order.
They make up 55% of all combinations, while only 22% of the combinations present a reverse order (under the diagonal). In the rest of the combinations, 23%, the syntactic realization of the two parts of the complex beginning is identical and is therefore not covered by this principle.

While the numbers that do not match the predicted order are not to be ignored, the number of complex beginnings that follow the order is such that it does indeed seem appropriate to try and find an explanation for why this order should be so. How is it that, contrary to many theories, longer adverbials tend to follow rather than precede shorter adverbials in sentence-initial position? Fox and Thompson’s discourse analysis of relative clauses in English (1990) will be taken as starting point for a possible explanation.

Fox and Thompson examined a sample of 414 relative clauses (drawn from conversational English) and analyzed their role in the information flow of the discourse. They found an interesting distribution of relative clauses that ground their head NP, as illustrated in the sentences in (7), in contrast to relative clauses that characterize their head NP, as illustrated in the sentences in (8) (the brackets in the examples are Fox and Thompson’s).

(7) a Probably the only thing [you’ll see] is like the table. (1990:302)
    b Well see what the problem [I have] is my skin is oily and that lint just flies into my face. (1990:303)
(8) a they’re selling these candies now [that explode when you chew on them]. (1990:305)
    b I don’t like the pants [that come down narrow and then bell out]. (1990:305)

According to Fox and Thompson, to ground a noun phrase is to “locate its referent in conversational space by relating it to a referent whose relevance is clear, that is, to a Given referent in the immediate context” (1990:300). In the examples in (7a) and (7b) the grounding of the noun phrases the only thing and the problem is taken care of by the two relative clauses, which respectively relate their Head NP to the conversational partners you and I. In (8a) and (8b) the grounding is taken care of by the preceding Subject and Verb. In (8a), for instance, the verb form selling relates these candies to they, a Given entity, i.e. a referent whose relevance in that particular discourse is clear. Similarly, the pants are
grounded by the fact that the lexical verb establishes the relationship between the speaker, who is a Given entity, and the newly introduced pants. When grounding is taken care of by a preceding Subject and Verb, Fox and Thompson refer to it as ‘main-clause grounding’ (1990:300). Grounding with the help of an adverbial clause that follows the NP that is to be grounded is referred to as ‘anchoring’ (Prince 1981:236), or ‘file-establishing’ (Du Bois 1980:223).

Taking this analysis into account it is not surprising anymore that Fox and Thompson found that when a Head NP functions as Object in the main clause (i.e. occurs most probably late in the sentence), then the relative clause that goes with this NP tends to fulfill a characterization function. This is so because the NP will have already been grounded with the help of main-clause grounding. When, on the other hand, an inanimate Head NP referring to a New entity functions as Subject in the main clause (i.e. occurs most probably early in the sentence), an accompanying relative clause will generally fulfill a grounding function rather than a characterization function.4

What is interesting for the study of complex beginnings is that the grounding capacity of clauses may be an explanation for their frequent occurrence in second-initial position. Clauses seem an excellent tool for grounding whatever concept that precedes them, since clauses have functional slots available for more than one entity. Consequently, they are particularly suited to house concepts that need grounding in one of their slots, while the lexical verb then relates these concepts to Given entities that are housed in the other slots of the clause. Note by the way that, as will be shown in Chapters 4 and 5, this does not mean that for instance adverb phrases are not suited to perform grounding functions. It just means that clauses can do so exceptionally well.

Consider the example in (9) as an illustration of how the grounding function of clauses may work in complex beginnings:

(9) On the mainland, too, the 'new right' has allowed its mask to slip. The neo-Fascists' leader, Mr Fini, with his glasses and air of a young professor, could not be further from the textbook neo-Fascist. Indeed, during the election campaign he shunned the word fastidiously. Yet this shrewd operator treads a fine line between reassuring the public and throwing morsels of ideology to his rank and file. On Friday, Mr Fini's mask slipped when he sang the praises of Mussolini to La Stampa. Mr Berlusconi, he
The internal order of complex beginnings

said, would have his job cut out to match the achievements of Mussolini. On Monday night, [when the votes were in the bag], young neo-Fascist bloods deliriously gave the fascist salute and fought police in central Rome. [NEC 432-191]

First we should note that the job of any orientation, at the very minimum, is to ground the event that is presented in the main clause, i.e. to relate the main-clause event to a Given referent in the preceding discourse. If an orientation does not do so adequately, then its point as orientation is lost: the text receiver will fail to see the relevance of this newest addition to the discourse. (Later we will see examples of how an orientation does not have to stop at simply relating the main-clause event to a Given referent, but that it will also provide decisive information as to the nature of that relation, be it contrastive, supportive, emphatic, etc.).

In the passage in (9), both On Monday night and when the votes were in the bag ground the fighting-and-saluting event. However, they each do so in a slightly different way. To start with when the votes were in the bag, this clause grounds the event in the main clause because it suggests a causal relation between the end of the previously introduced election process – which is ‘a referent whose relevance is clear’ – and the fighting-and-saluting in the main clause.

On Monday night also grounds the fighting-and-saluting, but in a slightly more complicated way. Firstly, note that the phrase on Monday night itself does not constitute or include a Given referent, unlike when the votes were in the bag. At the moment this particular point in time is introduced, its relevance is not yet clear. However, at the time this article was published the particular Monday night that is referred to is ‘given’ in the sense that it can be identified by readers of this passage: the absolute timeline is a shared concept and Monday night represents a point on that timeline. Second, we can establish that though on Monday night is not itself a relevant referent yet, the pattern of starting a sentence with a temporal element has been used earlier in the passage: preceding sentences featured elements such during the election process and On Friday in their sentence openings and the introduction of a new point in time at which a new event took place is a discourse move that the reader can expect. This means that despite the fact that On Monday night itself is not a relevant entity yet, minimally the semantic function of On Monday night may be considered relevant and therefore Given.
In order to add relevance to the orientation at this point in the discourse, the writer used a move that motivates the temporal jump to Monday night, i.e. to this particular point in time. The adverbial clause that follows *On Monday night* in fact answers the question *Why did this happen on Monday night?* Well, because at that point in time the votes were in the bag. The clause then contrasts Monday night to the period that was described in the preceding discourse, namely ‘during the election process’. In sum, the adverbial clause makes clear why the author took his narrative from Friday to Monday night and as a result, the relative adverbial not only has an orientational function with regard to clause that follows, but also a grounding function with regard to the preceding adverbial *On Monday night.*

As we will see in Chapter 5, this is a technique that is often used. First a writer chooses a temporal perspective as a method of development. Then the reader is led to various points in time at which particular events took place. Often, relevance is added to these points by a clausal adverbial in second-initial position that fulfills a grounding function with regard to the element in first initial position (again, note that other syntactic realization, as well, can fulfill a grounding function towards the first initial adverbial; see Chapters 4 and 5). In Chapter 4 it will become clear that whether or not an adverbial in second initial position grounds the adverbial in first initial position is an important parameter for the classification of complex beginnings.

### 3.4 Semantic Function

With regard to semantic function most predictions regarding relative order concentrate on sentence-final position. Quirk et al., for instance, assume that in sentence-final position adverbials are ordered according to the following principle: RESPECT precedes PROCESS precedes PLACE precedes TIME precedes CONTINGENCY (1985:565). Similar ordering principles for final position can be found in Mackenzie (1997:183), Sinclair (1990:284), Leech and Svartvik (1992:201), and Biber et al. (1999:810). Those that refer to initial position are considerably less wide in scope and include only two or three semantic functions, such as ‘PLACE precedes TIME precedes CONTINGENCY’ and ‘PROCESS precedes TIME’ (Quirk et al. 1985:565-6). This means that the relative order of complex beginnings based on semantic function is still relatively open. This section will therefore examine whether specific preferences can be
observed. To this end, all adverbials in the 496 complex beginnings were classified according to their semantic function. This classification is partly based on Halliday and Hassan’s categories ADDITIVE, ADVERSATIVE, CAUSAL, and TEMPORAL (1976:242-3) and expanded with a SPATIAL and a PROCESS category. All major categories include minor categories (e.g. PROCESS includes Manner, Means, Agent, Comparison, Quality and Instrument [Biber et al. 1999:776, Dik et al. 1990]; CAUSE includes Reason, Result, Purpose, Conditional, Respective), but these subcategorizations are not presented in the tables below, since the frequencies were too low for meaningful statistical analysis. In (10)-(16), all main categories are exemplified (the first adverbial in each sentence relates to the semantic function that is illustrated).

(10) CAUSAL (also referred to as CONTINGENCY [e.g. Biber et al. 1999:779])
   a As a consequence of this, surely, women’s magazines have been left with no alternative but to get raunchier and raunchier in order to sell. [NEC 484-221]
   b If we really tried to get people well fast, come September we’d have to turn away all but emergency work (there are payment systems to cover that). [NEC 172-43]

(11) ADVERSATIVE
   a On the other hand, high in the atmosphere this difference would be reversed. [NEC 82-10]
   b In spite of the difficulties, by the mid-1980s scientists had managed to isolate several cell-surface adhesion receptors. [NEC 96-11]

(12) TIME (major sub-groups: AT and CIRCUMSTANCE [Dik et al 1990])
   a Once the young women left college, however, they often felt adrift in a world that was not yet prepared to receive them. [NEC 65-8]
   b Secondly, in an industry where new markets are almost never created, romantic fiction is definitely the growth area. [NEC 220-70]

(13) PLACE
   a In Goma, for all the aid agencies and the rules, it is not easy to get famine relief. [NEC 364-146]
   b In housing, in the ‘50s and ‘60s, we pulled down the terraces – destroyed whole communities. [NEC 151-33]
(14) ADDITIONAL
   a  Indeed, during the election campaign he shunned the word fastidiously. [NEC 431-191]
   b  For instance, instead of receiving two terms’ notice of inspection and waiting five weeks for the full report, it was given five week’s notice and waited almost two terms for its reports. [NEC 436-197]

(15) ATTITUDINAL
   a  Alarmingly, however, many believe parents and the government have failed miserably to provide effective education about Aids. [NEC 368-149]
   b  Of course, as every doctor knows and recognizes, the brain is the seat of thought, and if the brain is damaged the capacity to think declines, often profoundly. [NEC 319-112]

(16) PROCESS
   a  Obediently, unquestioningly, Wang does the move again. [NEC 207-61]
   b  Together, with the help of Mary's fortune, they promoted wildly controversial feminist causes such as endowing John Hopkins with a medical school under the stipulation that women be admitted on an equal footing with men. [NEC 68-8]

Again the categorization process was not unproblematic. The lack of discreteness between different categories is particularly obvious for a classification process based on semantic function (see e.g. Harris 1988:71, Ford 1993:23). Ford, in her analysis of adverbial clauses in conversation, points out, for instance, that temporal conjunctions such as when and whenever also have conditional uses (1993:23). See for similar observations Biber et al. (1999:782, 857ff, 879).

The relative orders in which the semantic functions were encountered in the NEC are set out in Table 3.4. From this table, it is clear that temporal adverbials occur by far the most in complex beginnings (54.8% in first initial position and 47.2% in second initial position). This confirms earlier counts by Gustafsson (1983:10), Jacobson (1964: 80, 86ff; 91ff, 154, 169ff), Biber (1988: 50, 77, 224, 246ff), and Biber et al.(1999:802). Overall, however, no preponderant order can be discerned. Almost all combinations occur and the cells above the diagonal in Table 3.4, the cells below the diagonal (which contain the reverse orders), and the cells in the diagonal all represent about one third
of all combinations. As a result, it is safe to say that semantic function in itself cannot adequately function as a parameter for classifying types of complex beginnings, since it cannot adequately predict the relative order in complex beginnings.

Table 3.4: Relative order of semantic function in complex beginnings (NEC)

The subcorpora display a number of differences with regard to semantic function. While the literary texts contain more temporal combinations than the academic texts, the latter contain more combinations with adversative and causal adverbials. However, none of the subcorpora nor the NEC as a whole revealed significant preferences for first initial or second initial position for any of the semantic functions. For instance, although academic texts had twice as many combinations containing adversative adverbials, the proportion of adversative adverbials in first initial position is, compared to the NEC, as a whole, practically the same (.81 versus .83) (see Table 3.5).
Let us now consider the combination of the parameters semantic function and syntactic realization, to find out if there is any association between realization, semantic function and internal order. In this context, Table 3.6 provides an overview of the syntactic realizations of the five most commonly occurring semantic functions (n=439) and their distribution across first and second initial position:

<table>
<thead>
<tr>
<th>Semantic Function</th>
<th>1st initial</th>
<th>2nd initial</th>
<th>1st initial</th>
<th>2nd initial</th>
<th>1st initial</th>
<th>2nd initial</th>
<th>1st initial</th>
<th>2nd initial</th>
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<td>Causal</td>
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<td>86</td>
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<td>1</td>
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<tr>
<td>Attitudin.</td>
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<td></td>
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<td>55</td>
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<td>273</td>
<td>234</td>
<td>43</td>
<td>59</td>
<td>34</td>
<td>19</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 3.6: Syntactic realization of semantic roles in 1st and 2nd initial position
The internal order of complex beginnings

The first insight such a counting exercise offers is that TIME adverbials are realized most diversely, followed by CAUSAL adverbials. PLACE adverbials tend to be realized as prepositional phrases while adversative, additional and attitudinal adverbials tend to be realized as adverb phrases. The second insight is that first initial TIME adverbials are generally realized as an adverb or a prepositional phrase, while second initial TIME adverbials are generally realized as a clause or a prepositional phrase. When we look at the sub-semantic function that the majority of these second-initial temporal clauses fulfill, we find that most are classified as CIRCUMSTANCE (Dik et al.:1990). This observation again confirms the grounding theory: relating Given concepts to New concepts often means description of circumstances in which both the Given and the New concept play a part. CIRCUMSTANCE satellites are therefore likely candidates to fulfill grounding functions. In fact, as Table 3.7 shows, when only those complex beginnings that have time adverbials in both

<table>
<thead>
<tr>
<th>in percentages</th>
<th>sum = 72%</th>
<th>2nd initial position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>adverb phrase</td>
<td>noun phrase</td>
</tr>
<tr>
<td>1st initial pos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>adverb phrase</td>
<td>6.8</td>
<td>1.2</td>
</tr>
<tr>
<td>noun phrase</td>
<td>.6</td>
<td>1.9</td>
</tr>
<tr>
<td>prepos. phrase</td>
<td>.6</td>
<td>11.2</td>
</tr>
<tr>
<td>nonfinite clauses</td>
<td>1.2</td>
<td>3.7</td>
</tr>
<tr>
<td>sum = 23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd initial pos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>finite clause</td>
<td>.6</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>7.5</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Table 3.7: Relative order of syntactic realization in temporal combinations (NEC)
first and second initial position are considered (31.2% of all combinations; see Table 3.4), more than 70% of the complex beginnings comply with Quirk et al.’s syntactic ordering principle, and only 4% exhibit a reverse order.

The results in Table 3.7 are in sharp contrast with the preponderant orders in complex beginnings with an adversative adverbial in second initial position (n=68; 13.6% of all combinations in Table 3.4). As was shown above, adversatives tend to be realized as adverbs phrases (e.g. however), and, as Table 3.8 shows, this generally yields xx-adverb phrase combinations:

<table>
<thead>
<tr>
<th>in percentages</th>
<th>1st initial pos.</th>
<th>2nd initial position</th>
</tr>
</thead>
<tbody>
<tr>
<td>sum = 23%</td>
<td>sum = 8%</td>
<td></td>
</tr>
<tr>
<td>adverb phrase</td>
<td>22.1</td>
<td>1.5</td>
</tr>
<tr>
<td>noun phrase</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>prepos. phrase</td>
<td>38.2</td>
<td>1.5</td>
</tr>
<tr>
<td>nonfinite clauses</td>
<td>8.8</td>
<td>1.5</td>
</tr>
<tr>
<td>finite clause</td>
<td>19.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>89.6</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 3.8: Relative order of syntactic realization in X-ADVERSATIVE openings

In this case 69% are in contrast with the syntactic realization order, while only 7.5% follow it. In other complex beginnings that feature an adverb in second initial position, this adverb generally fulfills an attitudinal, additional or causal function on the one hand or a temporal function on the other hand. Since all attitudinal adverbials modify the propositional...
level, while a great number of the causal and additional adverbials modify the rhetorical level, this leads to the hypothesis that the property of layer modification plays an important part in the internal order of complex beginnings.

3.5 Layer modification
The last adverbial property that is assumed to influence relative order of satellites, and the one that is often considered to be the most influential, is layer modification. As was noted before, it has given rise to two contrasting hypotheses. Based on a corpus analysis, Quirk et al. hypothesize that rhetorical and interpersonal adverbials tend to yield to representational adverbials when both are in competition for absolute initial position (1985:651). This, according to them, is due to the fact that grammatical peripherality (of interpersonal and rhetorical satellites) is less strong than semantic peripherality (of experiential satellites). FG grammarians on the other hand predict that rhetorical adverbials precede interpersonal adverbials which precede representational adverbials (Hengeveld 1997:134, Bolkestein 1992:398), and they base this hypothesis on the principle of scope. As was noted in Chapter 2, satellites functioning at higher layers of the clause are supposed to have all lower layers in their scope. Furthermore, the more initial an adverbial is placed, the larger the chunk of discourse that still falls within its scope. The logical conclusion that follows from both of these assumptions is that rhetorical satellites precede interpersonal satellites and that interpersonal satellites precede representational satellites. The argumentation within SFG is, although less explicitly, also based on scope relations (see Gómez-González 1998). When Halliday argues that “If a speaker includes within the message his or her own angle on ...[a] matter, it is natural to make this [angle] the point of departure”, he in fact says that the angle of the speaker naturally scopes over the entire clause (1994:49-50). When he argues that “if there is some element expressing the relationship to what has gone before, by putting this first, we thematize the significance of what we are saying” he again argues that such a rhetorical adverbial naturally scopes over the entire clause (1994:49-50).

In order to find out which, if either, of the two predictions above is confirmed by the complex beginnings encountered in the NEC, consider the layer modification classification according to which the adverbials were categorized (see also Section 2.2):
Chapter 3

(17) **Representational level**

a  **Predicate satellites** capture the lexical means which specify additional properties of the set of SoAs designated by a nuclear predication (Hengeveld 1989:131, Dik et al.1990:28)

i) On it, *in felt-pen*, he had indicated the best places to make a Leap of Faith. [PEC 456-208]

ii) *Obediently, unquestioningly*, Wang does the move again. [NEC 207-61]

b  **Predicational satellites** capture the lexical means which locate the SoAs designated by a predication in a real or imaginary world and thus restrict the set of potential referents of the predication to the external situation(s) the speaker has in mind (Hengeveld 1989:131, Dik et al.1990:28)

i) *In local government*, instead of addressing Madam Chairman or Mr Chairman, the holder of the office becomes an inanimate Chair. [NEC 382-160]

ii) *Whereas in the early Eighties violence committed by 10-16-year-olds remained static, from 1987 onwards* it has increased by 37 per cent. [NEC 311-110]

(18) **Interpersonal level**

a  **Propositional satellites** capture the lexical means through which the speaker specifies his attitude towards the proposition he puts forward for consideration (Hengeveld 1989:131, Dik et al.1990:28)

i) For *surely*, of all the men I've ever known, he was the least enslaved by passion. [NEC 28-4]

ii) *If my research is correct*, however, it is not steep and jagged at all, but smooth and undulating with sharp curves. [NEC 455-208]

b  **Illocutionary satellites** capture the lexical means through which the speaker modifies the force of the basic illocution of a linguistic expression so as to make it fit his communicative strategy (Hengeveld 1989:131, Dik et al.1990:28)

i) *Roughly speaking*, from the middle of 1991 until the summer of last year, the company managed to operate at around break-even. [NEC 424-188]

ii) And, *to paraphrase Shakespeare*, if vinyl be the food of love, play on. [NEC 274-95]
(19) **Rhetorical level**: clausal satellites capture the lexical means through which the speaker locates the speech act designated by a clause within the context of discourse and thus restricts the set of potential perlocutions of the clause (Hengeveld 1997:4)

   i) *Nevertheless*, to the extent that there is something in the theory, it would constitute another example of a longitudinally transmitted virus of the mind. [145-30]

Again, the classification was at times problematic. To refer to Ford again, if a temporal conjunctions such as *when* and *whenever* also has a conditional use, it is not a straightforward matter to decide whether the adverbial should be classified as predicational (temporal functions) or a propositional (some conditional functions) (1993:23).

The orders in which the various satellite types occur are given Table 3.9:

<table>
<thead>
<tr>
<th>in percentages</th>
<th>predicate</th>
<th>predicational</th>
<th>propositional</th>
<th>interpersonal</th>
<th>rhetorical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st initial pos.</strong></td>
<td>.8</td>
<td>.2</td>
<td>.2</td>
<td>.4</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>predicate</td>
<td>1.0</td>
<td>47.4</td>
<td>5.4</td>
<td>.6</td>
<td>11.5</td>
<td>65.9</td>
</tr>
<tr>
<td>predicational</td>
<td>.6</td>
<td>6.3</td>
<td>3.6</td>
<td>3.0</td>
<td>13.5</td>
<td></td>
</tr>
<tr>
<td>propositional</td>
<td>.8</td>
<td>.2</td>
<td>12.5</td>
<td>4.4</td>
<td>.2</td>
<td>.8</td>
</tr>
<tr>
<td>interpersonal</td>
<td>.8</td>
<td>.2</td>
<td>12.5</td>
<td>4.4</td>
<td>.2</td>
<td>.8</td>
</tr>
<tr>
<td>rhetorical</td>
<td>2.4</td>
<td>67.1</td>
<td>13.9</td>
<td>.8</td>
<td>15.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 3.9**: Relative order of layer modification (NEC)
The most obvious conclusion that can be drawn from Table 3.9 is that rhetorical-predicational orders occur about as frequently as predicational-rhetorical orders (12.5 versus 11.5%). The same goes for propositional-predicational and predicational-propositional (6.3 versus 5.4%). In total about 26.4% follow FG/SFG order (i.e. high-low), while 20.8% follow Quirk et al’s order (i.e. low-high). The rest of the complex beginnings (52.8%) are realized by two satellites that function at the same level, especially two predication satellites. Neither prediction is very accurate, therefore, and contrary to the expectations ‘layer modification’ does not seem a useful parameter for the classification of complex beginnings.

With regard to the subcorpora, it should be mentioned that academic texts contain more complex beginnings than expected that include a rhetorical satellite, and fewer complex beginnings than expected with combinations of two predicational satellites. Fiction texts, on the other hand, contain more combinations of two predicational satellites and less complex beginnings that include a rhetorical satellite.

To complete the picture, a cross of the parameters syntactic realization layer modification yields the – not too surprising – insight that adverbials functioning at the rhetorical level are generally realized as adverb phrases. No insight with regard to relative order is gained, however, except that again, predicational adverbials that are realized as adverbs tend to occur in first initial position, while those that are realized as clauses tend to occur in second initial position. This is to be expected, since most predicational adverbials are temporal (the total number of predicational adverbials in both positions is 657, 489 of which are temporal and 97 spatial).

3.6 Conclusion
Section 3.3 through 3.5 have shown that none of the adverbial properties that are traditionally used as a basis for describing the internal order of adverbial clusters nor any combination of those properties can be considered decisive in accounting for the relative order of all complex beginnings. It has also been shown, however, that as soon as the counts are limited to temporal satellites – which are mainly predicational satellites, ordering principles based on syntactic realization predict about two thirds of all orders. This means that (1) the property that was considered least influential in the end accurately describes the largest group of complex beginnings and (2) that the adverbials that defy this
The internal order of complex beginnings

ordering principle generally function at the propositional or rhetorical level. A possible explanation for the relative accuracy of the syntactic ordering principle was found in the grounding capacity of second-initial adverbials. The next chapter will therefore examine if and how this grounding function can be used as a means to categorize complex beginnings.

Notes

1 These same three registers also form the basis for the written corpus of the Longman Grammar of Spoken and Written English (Biber et al. 1999).
2 Unless specified otherwise, the difference between means will be tested with one-way Anova; post-hoc comparisons will be carried out with Tukey’s HSD procedure.
3 Tested with the Kruskall-Wallis-test (non-parametric) due to a lack of homogeneity of variance between groups (Levene test; p=0.003) (Meuffels 1992:105, Corston and Colman 2000:80).
4 Fox and Thompson (1990) also found that the distribution of characterization and grounding also has consequences for the syntactic function of the Head NP in the two types of relative clauses, but discussion of those findings fall outside the scope of this study.
4

A typology of complex beginnings

4.1 Introduction
Chapter 3 showed that ordering principles based on properties such as syntactic realization, semantic function and layer modification do not satisfactorily predict the order in which adverbials combine in English complex beginnings. In fact, it turned out that for each property virtually all orders could be encountered. When constructing a typology of complex beginnings, therefore, another parameter is needed, and such a parameter presented itself in the discussion of syntactic realization (Section 3.2). It was observed that clauses occur twice as many times in second initial position as in first initial position and that these second-initial clauses often do not only provide an orientation for the main clause but that they also ground the orientation in first initial position. Section 4.2 will show how all complex beginnings (and not just those with a second initial clause) can be divided into two classes, namely (1) those in which the second adverbial does not ground the first adverbial; and (2) those in which the second adverbial does ground the first adverbial. In both classes, several subclasses can be identified, yielding a typology of five types of complex beginnings in total. These sub-classifications will be discussed in Sections 4.3 and 4.4, respectively. Section 4.5 will then provide an overview of the typology and examine whether it shows regularities with regard to semantic function, syntactic realization and layer modification. Subsequently, Section 4.6 will use the typology to address the issue of less acceptable examples of complex beginning (see Chapter 1), and Section 4.7 will discuss complex beginnings containing 3 adverbials. Section 4.8, finally, will summarize.

4.2 The functions of the second initial adverbial
In Section 3.3 it was shown that the function of adverbial clauses in second initial position can be twofold. Firstly, by virtue of it being in the orientational field of a sentence, it always provides an orientation for the
Chapter 4

The structure of example (1a) is similar to that of example (9) in Chapter 3. The text from which it is taken attempts to present a chronological reconstruction of the circumstances that led to the execution of Glen Ashby, a prisoner in Port of Spain, who was convicted of murder at a time when the city was suffering from a series of brutal crimes. With the sentence in (1a), the reader has arrived at a point in the chronology at
which Ashby is awaiting the Queen’s grace, despite the preparation of his death warrant. At that moment, Candace Carrington-Scott is introduced into the discourse. Although Carrington-Scott and Ashby do not have anything to do with each other yet, a connection between the two is suggested by the temporal relation that is established between Ashby’s death warrant being signed and Carrington-Scott’s swimming expedition. The nature of the relation has not been specified, but an expectation of some relation between a newly introduced entity on the one hand and an entity that is clearly Given (i.e. relevant to the discourse) on the other hand has been raised. It is this expectation that grounds the new entity in the discourse. (Later, Carrington-Scott turns out to be murdered upon returning from the swimming pool, and public outrage over this murder forces the authorities to adopt a ‘tough-on-crime’-attitude: Ashby is denied grace and subsequently executed).

The second initial clause is not the only element that provides an orientation to the main clause in (1a), however. In analogy to example (9) in Chapter 3, July 11 also provides an orientation, but without the clause in second-initial position it is not immediately clear for the reader why this orientational date is important: why should the chronology be taken to this point in time and not to any other point? The adverbial clause in this particular discourse does not give an explanation of the relevance of July 11, but what it does do is relate this date to a situation that concerns the discourse topic, namely Ashby. This means that, again, we have a first initial adverbial that provides an orientation to the main clause, and a second initial adverbial that both provides an orientation to the main clause and that grounds the first initial adverbial by relating it to a Given referent.

A similar analysis applies to the sentence in (1b), except that in this case the second initial adverbial does not ground the absolute initial adverbial by making the point in time relevant, but by specifying this point in time. Because Sometime later is itself a relative reference, it acquires part of its relevance from the preceding discourse: sometime later than the event described in the previous sentence. This means that it is partly grounded already. What we do not know yet, however, is where we should place this point in time (how much later?). This is where the second adverbial comes in, since it specifies which event is to be associated with Sometime later. At the same time, of course, this second initial adverbial provides an orientation towards the main clause, since it provides a cause for the surprise expressed in it. This results in a
relational pattern that is similar to the one in (1a), namely a first adverbial that provides an orientation to the main clause and a second adverbial that provides both an orientation to the main clause and that grounds the adverbial in first initial position.

For the sentence in (1c) the analysis of the overall pattern of orientations is a bit different, and the particularities of it will be discussed in Section 4.4. What is relevant at this point, however, is that in this sentence, too, the second initial adverbial in a way grounds the first initial adverbial. This time its function is not so much to establish the relation to a previous concept but to establish the exact nature of the relationship between the referent in the first adverbial and a previous referent. The first adverbial (by the early 1970s) provides the reader with a point in time again that is to serve as an orientation for the main clause. Before the reader can wonder why specifically this point in time is a relevant guidepost, he gets an answer in the form of however: whatever the situation was in an earlier period, in this new period – the early 1970s – things are different. By the early 1970s gains relevance, therefore, by being the concept to which the contrast status of the utterance is attached.

With regard to the examples in (2) the analysis is totally different. In neither case does the adverbial clause in second initial position enter into a relationship with the first initial adverbial. This is most obvious for the example in (2a), where the first adverbial is a rhetorical satellite, with a fixed meaning. Adverbs such as for example, nevertheless, however, etc. set up an unambiguous connection between the preceding discourse on the one hand and whatever it is that follows on the other hand. Whenever these adverbials are well-chosen, therefore, they need no further explanation upon introduction and whatever it is that they provide an orientation to is grounded then as well, because by nature these adverbials relate the concepts that follow to the concepts that preceded.

In example (2b) the situation is less obvious and the difference between (1a) and (1b) on the one hand and (2b) on the other hand is possibly best illustrated with the help of the following paraphrases:

(1) a’ On July 11, Candace Carrington-Scott took her three-year-old daughter to a swimming lesson.

Question: Why is it important to give us the exact date of this event? (asks for relevance of perspective, why did you take me to this particular point in time.)
Answer: Well, because at that very date Ashby's death warrant was being routinely prepared for the signature of Trinidad's figurehead President in Port of Spain. (And so, what I am going to say concerns Ashby – our discourse topic.)

b’ Sometime later it would strike me as very strange that she'd wanted to go into the village at all that morning.

**Question:** When exactly? (asks for specification of perspective.)

**Answer:** Well, after I'd read her father's book and realized all the exotic places he'd taken her during the years they'd traveled together.

Both questions in the paraphrases above ask specifically about the adverbial in *first* initial position, and both answers involve the information in the adverbial in *second* initial position. Now consider similar attempts to paraphrase (2b):

(2) b’ **On the St Petersburg waterfront,** you may find that the crane operator will drop your cargo in the water.

**Question:** Why is it important to give us the place of this event? (asks for relevance of perspective, why did you take me to this particular place.)

?**Answer:** Well, if you don’t pay off the right people.

or alternatively

**Question** Where exactly? (asks for specification of perspective.)

?**Answer:** If you don’t pay off the right people.

These paraphrases show that it is not possible to ask a question about *On the St Petersburg waterfront* and then answer with the information presented in the clause in second-initial position. This indicates that *if you don’t pay off the right people* does not enter into a relation with the preceding adverbial and as a result only provides a forward orientation.

It turns out that all 496 complex beginnings can be assigned either to class 1 (the second initial adverbial only provides an orientation to the main clause) (210 examples = 42.3%), or to class 2 (the second initial adverbial provides an orientation to the main clause and also performs some sort of anchoring function with regard to the first-initial adverbial)
(286 examples = 57.7%). The NEC contained more class 1 complex beginnings than class 2 complex beginnings ($z=-3.457, p<0.001$). Both categories will be further discussed in Sections 4.3 and 4.4, respectively.

Notice, by the way, that this way of classifying complex beginnings ignores intra-clausal/extra-clausal structures. Both complex beginnings in (1) and the one in (2b) consist of what is generally analyzed as an extra-clausal or parenthetical constituent in second initial position (P2) and an element in first initial position that could either be extra-clausal or intra-clausal (P1 or P2) (see Section 2.4). Nevertheless, the complex beginnings in (1) are considered to belong to a different class than the one in (2b).

4.3 Class I: no grounding function for the 2nd initial adverbial

First, complex beginnings in which the second adverbial only provides an orientation to the main clause will be further subcategorized. Consider the examples in (3) and (4) below, and notice that all are class 1 complex beginnings: none of the adverbials in second initial position ground the adverbials in first initial position. Despite this shared property, however, the examples in (3) and (4) still differ from each other, in ways that will be explained below:

(3)  
  a However, between 1989 and 1993 the percentages buying or reading twentieth-century fiction (or both) during the year prior to that in which the survey was conducted showed no discernible trend, fluctuating to within 2 to 3 points of 15 per cent. [NEC 417-184]
  
  b Although scientists have long recognized the importance of adhesive interactions in the body, until recently they knew little about how such interactions exert their diverse effects on physiology. [NEC 94-11]
  
  c Of course, as every doctor knows and recognises, the brain is the seat of thought, and if the brain is damaged the capacity to think declines, often profoundly. [NEC 112-319]

(4)  
  a Obediently, unquestioningly, Wang does the move again. [NEC 61-207]
  
  b Stripped of his Army rank, hair falling over his collar, Anthony Dryland presents an unlikely figure of retribution. [NEC 56-194]
(4) c When monks in Vietnam set themselves alight during the Vietnam war, when monks in Burma defied the military junta, they were acting in accordance with an ancient tradition of social responsibility. [NEC 171-394]

First the examples in (3) will be analyzed, since this type of examples represents the bulk of the complex beginnings in this class. In sentence (3a), the temporal satellite between 1989 and 1993 provides an orientation for the event in the main clause and However then locates this combination of the main clause and between 1989 and 1993 in the rhetorical structure of the text. In other words, the combination of between 1989 and 1993 and the main clause fall within the scope of However. A similar analysis applies to (3b) and (3c). The general representation for this type of complex beginnings is in Figure 1 (NB: the labels ‘sat1’ and ‘sat2’ in this and other figures in this chapter are intended to represent linear order, not scopal hierarchies):

Because the complex beginning proceeds step by step, orientations such as in the sentences in (3) will be called a stepwise orientation. Typical for stepwise orientations is that the first adverbial provides an orientation for the combination of the second adverbial and the main clause, while the second adverbial only provides an orientation for the main clause. The second satellite does not relate to the first satellite in any way. In total, 92% (193 out of 210) of all class 1 complex beginnings can be characterized as stepwise orientations. This is 39% of all complex beginnings.

The other subtype I will call compound orientation. Consider the examples in (4), again. In these sentences the first initial adverbial does not provide an orientation for the combination of the second initial adverbial and the main clause. Rather, both initial adverbials select either
the main clause itself or a term or predicate in this main clause, and they then both provide an orientation for this entity. For example, in sentence (4a) both adverbials present an orientation for the predicate: obediently and unquestioningly modify the manner in which Wang repeats her movement. In sentence (4b) the adverbials stripped of his Army rank and hair falling over his collar prepare the reader for the state in which he will find one of the terms in the main clause, in this case the Subject. In sentence (4c), finally, the two clauses both present an orientation for the core predication. A compound orientation is characterized, therefore, by the fact that both the first and the second initial adverbial provide an orientation for the main clause or for an element at one of the lower levels of the main clause. Both initial adverbials necessarily provide an orientation for the same element in the main clause. If not, the clause cannot be processed anymore, as is shown by the example in (5):

(5) Stripped of his Army rank, her hair unkempt, Anthony Dryland confronts his wife for the first time after her finding out about his infidelity.

A compound orientation can thus be represented in a structure as in Figures 4.2a-4.2c. Notice that, despite the fact that the first initial adverbial does not explicitly provide an orientation for the second initial adverbial, it does prepare the ground for it (indicated by the small dashed arrow between sat1 and sat2). This is a result of the fact that the number of choices for the second initial slot is inherently narrowed down by the concrete element in the first initial slot, because they need to modify the same entity (see also Pardoen 1999).
Compound and stepwise orientations can be formally distinguished from each other with the help of the following simple test:

(6) a Stripped of his Army rank and hair falling over his collar, Anthony Dryland presents an unlikely figure of retribution.

b Of course and as every doctor knows and recognises, the brain is the seat of thought, and if the brain is damaged the capacity to think declines, often profoundly.

Compound orientations are far less frequent than stepwise orientations. The NEC yielded only 17 instances, which represent 8% of all examples in class 1 (17 out of 210) and 3.4% of all complex beginnings in total.
4.4 Class 2: the 2nd initial adverbial grounds the 1st initial adverbial

Consider the examples in (7), (8) and (9) below, all of which belong to the second class of complex beginnings; that is, they all contain an adverbial in second initial position which, in some way or another, grounds the adverbial orientation in first initial position. Within this class of complex beginnings, three subclasses can be distinguished based on the nature of the relation between the second initial adverbial and the first initial adverbial and the second initial adverbial and the main clause.

(7) a Then, a month later, Charles Wilson appeared at an art exhibition being held by a friend of mine at her studio. [NEC 111-315]
   b Later, with England converted to Christianity, the daughters of the great Anglo-Saxon noblemen were sent abroad to France to be educated in the Christian and classical mode. [NEC 3-21]

(8) a By the early 1970s, however, this attitude was changing and Sir Robert Mark, who took over as Metropolitan Police Commissioner, promised to do away with corruption within the force. [NEC 119-329]
   b In the matter of trout fishing, of course, things are much more predictable. [NEC 53-185]

(9) a At a conference in London today, Mr Whiskin will stand up and ask his audience to change their minds too. [NEC 164-390]
   b Two years ago in Dublin I said if you don't have something that is perceived to be inclusive you've had it. [NEC 219-479]

First the examples in (7) will be dealt with since complex beginnings of this type have been analyzed previously on several occasions. Then in (7a) provides a sequential framework for the main clause, and – as was the case with Sometime later in example (1b) – it could function as an orientation without any further grounding because it is referential: Then refers to a period that follows the temporal setting of the previous SoA. It necessarily grounds the SoA in the main clause, therefore, because it presents this main clause event as temporally related to the previous SoA,
A typology of complex beginnings

Given entity. From this the reader may infer that the second SoA is relevant within the discourse. The phrase *a month later* then specifies exactly to which point in time the narrative has jumped. This is a minimal type of grounding. It does not do much more than specifying how the relationship already indicated by *then* should be valued. The minimal grounding capacity of *a month later* is also partly due to its syntactic realization. Adverbial noun phrases are inherently less equipped to relate concepts to other concepts because, unlike clauses and prepositional phrases, they have no relational tools available. Most clauses contain verbs and potentially they also contain slots for more than one entity. With these tools they can easily relate a given concept to a new concept. Prepositional phrases contain prepositions (obviously), which can also establish a relation between the concept they ground and another concept (*‘with this other concept’, ‘on this other concept’, ‘by this other concept’ etc.*). As a result, prepositional phrases and clauses are far better equipped to provide relevance. When noun phrases in second initial position are used to ground, the relation between two concepts will have to be inferred by the text receiver. Without ‘relating-tools’, a specification relation is more easily inferred than a relevance relation. This minimal grounding is enough in sentences such as in (7a), however, since first initial satellites such as *then* are partly grounded in the discourse already, as a result of their referential nature.

The second initial adverbial in the complex beginning in (7b) does not limit itself to specification but also adds relevance to both the initial adverbial and the main clause. Again *Later* provides the main clause with a sequential framework and *with England converted to Christianity* not only specifies how much later we are in the chronology (a few centuries) but it also explains why we have moved to this point in time (the situation has changed: the Anglo-Saxons are not heathens anymore). In addition, it provides a cause for the events referred to in the main clause.

Both analyses above justify the conclusion that the complex beginnings in (7) exhibit the following pattern: the second initial adverbial provides an orientation to the subsequent main clause and it grounds the preceding adverbial. The first initial adverbial also provides an orientation to the main clause. I will call this orientation *grounded orientation* (see Figure 4.3), after the functionality of the adverbial in second initial position (see Section 4.5). About 59% of all complex beginnings in class 2 (168 out of 286) are *grounded orientations*, which is about 34% of all complex beginnings.
A few things should be noted about the representation in Figure 4.3. In the first place, a connection is made between sat1 and sat2, because, as a simple result of the linear nature of the sentence, the first satellite always limits the number of choices available for the satellite in second initial position. In the second place consider the orientational arrow between sat2 and the main clause. While it cannot be denied that the second adverbial provides an orientation for the main clause, the argument could be made that it provides this orientation via the first satellite. In such an interpretation, sat1 is the Head of the Orientation and sat2 the modifier of this Head. One reason for not choosing this interpretation is provided by the propositional paraphrase of (7b), in (10) below:

(10) **Later**, England was converted to Christianity. In that situation the daughters of the great Anglo-Saxon noblemen were sent abroad to France to be educated in the Christian and classical mode.

The sentence is now presented as a stretch of discourse and, using Vande Kopple’s terminology (1986), this stretch is organized according to a *chaining structure*. That is, the information in the predicate of the first sentence is carried over to the orientational field of the second sentence. That suggests at least a greater role for the orientation with *England converted to Christianity* than it being limited to the modification of *Later*. An independent orientational arrow between the second satellite and the main clause seems therefore justified. That the second clause in the stretch of discourse, too, is in the scope of *Later*, is taken care of by the orientational arrow between the first satellite and the main clause. A further reason for considering the second orientation to be independent
from the first is provided by the discussion of the set of complex beginnings in (8).

Both the examples in (7) and the examples in (8) have second adverbials that are traditionally analyzed as ‘parentheticals’ (e.g. Bolkestein 1998:2, Ziv 1985; but see Biber et al. 1999:138, who use a narrower definition of parentheticals). Reinhart (1975, 1983) has shown, however, that the parentheticals in (8) differ in important ways from those in (7). While it is claimed that a defining property of parentheticals is that they constitute a separate tone unit from the sentence in which they occur, and may in fact interrupt the structure of the main utterance (Wichmann 2001:177), it is also found that a parenthetical element such as of course in (11) does not constitute a separate tone unit at all. Rather, it is often integrated into the phonological contour of the main clause (Reinhart 1983, Wichmann 2001:186):

(11) He will be late of course.

Interestingly, in the sentence in (11) ‘integration in the phonological contour of the main clause’ could also mean ‘integration in the phonological contour of the preceding constituent’. Support for such an interpretation can be found in the (simplified) phonological representation of the following examples, which Gómez-González (1998) collected from the Lancaster Spoken British English Corpus (LSEC) (see also Wichmann 2001). In these examples '|' indicates a tone group boundary, and judging from this analysis all rhetorical satellites are integrated in a tone unit with their preceding elements:

(12)a more typically however | it’s not the governments | but business enterprises which ship the imports | (Gómez-González 1998:98 – LSECCPT01:473)

b West Morland for example | became particularly passionate | when talking about the influence television reporting from Vietnam | had had on the White House | in the late sixties | (Gómez-González 1998:86 – LSECAPT03:030)

c what for example | is he doing to ensure that his grip on power is strong enough | to make the necessary changes | (Gómez-González 1998:86 – LSECAPT11:031)
Both Reinhart’s results and the examples in (12) above support an analysis in which interpersonal and rhetorical satellites in second initial position are not necessarily analyzed as operating individually on both the preceding adverbial and the subsequent clause (as is the case in grounded orientations) but as connecting to the preceding adverbial, with which they can form one tone unit. The combinations of the first and the second initial adverbial together then provide an orientation for the subsequent main clause (recall that in Section 2.3 division of a complex orientation across two functional units was considered problematic).

Consider the passage (13) for further support for analyzing the two initial adverbials as one unit:

(13) a original: The survey shows that book purchases remained steady or even increased slightly over the period despite a growth in sales of videos and computer games…In 1989 56 per cent of all respondents taking part in the survey had read a book (of whatever kind) for pleasure or interest during the previous four weeks; by 1993 that percentage had increased to 66 per cent. In each year between 10 per cent and 15 per cent fewer readers had used a book for purposes of reference or information during the previous four weeks. However, between 1989 and 1993 the percentages buying or reading twentieth century fiction (or both) during the year prior to that in which the survey was conducted showed no discernible trend, fluctuating to within 2 to 3 points of 15 per cent. [PEC 418-184]

b manipulated: [Between 1989 and 1993, however] the percentages buying or reading twentieth century fiction (or both) during the year prior to that in which the survey was conducted showed no discernible trend, fluctuating to within 2 to 3 points of 15 per cent.

In the manipulated version in (13b) the original stepwise orientation is changed into a complex orientation. In this context, this change does not work, however, precisely because the rhetorical satellite joins forces with the preceding adverbial. It – so to speak – transfers its contrastive value to between 1989 and 1993. In this passage this transfer is impossible, however, since the period between 1989 and 1993 is not intended as a period in which something else was going on than in another period.
discussed in the preceding discourse. In fact, the preceding discourse also talks about 1989 to 1993, as is obvious from the use of the adverbial satellites *In 1989* and *by 1993* earlier in that passage. The contrast that is addressed is between the situation of ‘buying reference books’ and the situation of ‘buying 20th century fiction’. Therefore, the author’s choice was between the original stepwise orientation or an alternative such as in (13c) below. Reversal of the stepwise orientation is ruled out, however.

(13) c Between 1989 and 1993, the percentages buying or reading twentieth century fiction (or both) during the year prior to that in which the survey was conducted showed no discernible trend, however, fluctuating to within 2 to 3 points of 15 per cent.

Such a change of order is however not problematic in most grounded orientations, which again shows that the second adverbial is not as dependent on the first one as is the case with examples such as in (8).

Orientations such as in (8) I will call *complex orientations*, due to the fact that the two initial adverbials together form a ‘complex’ unit which, in its turn, grounds the subsequent main clause. Figure 4.4 presents a schema for *complex orientations*:

![Figure 4.4: Complex orientation](image)

Complex orientations constitute 33% of all complex beginnings in Class 2 and 18% of all complex beginnings in general (n=92). At this point it is necessary to point out a potential confusion in terminology: like stepwise, compound and grounded orientations, complex *orientations* are a specific type of complex *beginning*. Complex beginning is the umbrella term (the animal) where complex orientation is the specific term (the cow).

Until now we have only discussed complex orientations that had *however* in second initial position. The examples in (14), one of which
was earlier presented in (8b), show that the mechanism of grounding is not limited to this adverb.

(14a) For the past 30 years or more I have speculated, musefully and in print, on prospects for the forthcoming game fishing season. But to predict sport potential, particularly within the realm of British salmon and sea trout fishing, may be likened to Gypsy Rose Lee surveying her crystal ball and forecasting our fortunes [sic]. At best it requires a glimmer of divine guidance, which never seems available. At worst it is little more than very idle and often irresponsible speculation.

In the matter of trout fishing, of course, things are much more predictable. Back in the thirties, when I was a small boy living near York, it was possible to catch wild-bred trout within a 40-minute bike ride of my home.

b As the climate warms, scientists anticipate changes in tropical cyclone activity that would vary by region. Not all the consequences would be negative; in some rather arid regions the contribution of tropical cyclones to rainfall is crucial. In northwest Australia, for example, 20 to 50 percent of the annual rainfall is associated with tropical cyclones.

In (14b), for example functions as an orientation for the main clause; it helps the reader understand that this main clause should be taken as an example for the preceding assertion. However, for example does not provide this orientation for the main clause directly, but rather via In northwest Australia. This specific region is an illustration of one of the ‘rather arid regions’ referred to in the main clause of the previous sentence. The example status is therefore attached to this adverbial. This is also shown by a version of the complex beginning rewritten as a stretch of discourse:

(14) c Northwest Australia is a good example. Here/in that area 20 to 50 percent of the annual rainfall is associated with tropical cyclones.

In this passage the second part of the original complex orientation (for example) remains in the predicate of the first sentence and the orientation
of the second sentence is an echo of the orientation of the first sentence. This also suggests that the second initial adverbial in a complex orientation is truly attached to the first initial adverbial, and indeed functions much more as a modifier. In the grounded orientation on the other hand, the second initial adverbial transferred to the main orientation of the second sentence, suggesting a more independent relation to the core message.

The last type of complex beginning in Class 2 I will composite orientations. They are exemplified in the examples in (9) and they distinguishes themselves rather obviously from the first two types in this class in that the second initial adverbial in these complex beginnings cannot be considered a parenthetical element. However, the examples in (9) are like complex orientations in the sense that here, too, the second adverbial forms a unit with the first initial adverbial. In this type of complex beginning the two adverbials can almost be considered one single adverbial that provides a simultaneous orientation in two dimensions. Were language not tied to linear structure, a language user might well wish to express both the temporal and the spatial orientation at the same time:

![Diagram of composite orientations]

Composite orientations constitute about 8% of all anchoring orientations (n=24), and about 5% of all complex beginnings.

4.5 A typology of complex beginnings
In Sections 4.2 through 4.4 all complex beginnings were classified based on whether or not their second initial adverbial provided a grounding function for the first initial orientation. If so, the complex beginnings were further subclassified according to the way this second adverbial related to the preceding adverbial, yielding three types of orientations in
total: grounded, complex and composite orientations. If the second initial adverbial did not provide a grounding orientation towards the first initial adverbial, the constructions could be subclassified in either stepwise or compound orientations. This yielded the typology in figure 4.6:

In this typology, stepwise orientations are in a sense the odd ones out, since they are the only ones that actually provide two separate orientations. Complex orientations and composite orientations consist of two adverbials that form one unit. In grounded orientations the second adverbial relates to the first and in compound orientations, finally, the second adverbial is limited by the first, since both have to select the same entity. This unique property of stepwise orientations may possibly help to explain why the some of the complex beginnings in learner English are unacceptable or at least doubtful (see Section 1.2). This issue will be further discussed in Section 4.6. This section will continue with an examination of preponderant combinations (with regard to semantic function, syntactic realization and layer modification) in the various types of complex beginnings.

In Chapter 3 we saw that neither of the three tradition properties (syntactic realization, semantic function, layer modification) could satisfactorily predict the relative order of adverbials in complex beginnings, since almost all possible combinations were encountered. When we consider these properties per orientational type, however, a rather more regular picture emerges. Consider first the syntactic realizations of the five orientations in Table 4.7a and 4.7b:

<table>
<thead>
<tr>
<th>Orientation</th>
<th>combination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stepwise</td>
<td>adverb phrase - x</td>
<td>129</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>64</td>
<td>33</td>
</tr>
<tr>
<td>Compound</td>
<td>clause - clause</td>
<td>10</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>7</td>
<td>41</td>
</tr>
</tbody>
</table>

Table 4.7a: Syntactic realization of class I orientations (no g rounding function for 2nd initial adverbial)
Figure 4.6: A typology of complex beginnings
Clearly, all orientations have a preference for a specific type of syntactic realization. Stepwise orientations prefer an adverb phrase in initial position, followed by another type of adverbial (many stepwise orientations start with a rhetorical or propositional adverb such as however, moreover, etc and of course, unfortunately, etc). Conversely, complex orientations have a strong preference for an adverb in second initial position. For reasons discussed above, grounded orientations are mostly realized by either a prepositional phrase or a clause in second initial position. Interestingly, in 11 out of 14 ‘other’ realizations in second initial position, the first initial adverbial was referential (then, now, there, here) and therefore partly grounded in the discourse already. As a result these first orientations were less in need of the explicit grounding that can be provided by a clause or a prepositional phrase.

With regard to semantic function (Table 4.8), the results are predictable as well. Notice the reverse preferences for stepwise and complex orientations, again. Notice furthermore that grounded orientations feature almost exclusively temporal adverbials in second initial position.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>combination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounded</td>
<td>x – prepos. phrase</td>
<td>73</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>x – clause</td>
<td>81</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Complex</td>
<td>x – adverb phrase</td>
<td>92</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Composite</td>
<td>x – prepos. phrase</td>
<td>19</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>5</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 4.7b: Syntactic realization of class II orientations (grounding function for 2nd initial adverbial)
A typology of complex beginnings

### Table 4.8a: Semantic function of Class I orientations (no grounding function for 2nd initial adverbial)

<table>
<thead>
<tr>
<th>Orientation</th>
<th>combination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stepwise</td>
<td>adversative – x</td>
<td>79</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>causal – x</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>attitudinal – x</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>additional – x</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>60</td>
<td>31</td>
</tr>
<tr>
<td>Compound</td>
<td>time – time</td>
<td>11</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>6</td>
<td>35</td>
</tr>
</tbody>
</table>

### Table 4.8b: Semantic function of Class II orientations (grounding function for second initial adverbial)

<table>
<thead>
<tr>
<th>Orientation</th>
<th>combination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounded</td>
<td>x – adversative</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>x – causal</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>x – attitudinal</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>x – additional</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Complex</td>
<td>x – time/place</td>
<td>145</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>x – causal</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Composite</td>
<td>time – place</td>
<td>15</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>place - time</td>
<td>9</td>
<td>38</td>
</tr>
</tbody>
</table>


initial position. This is interesting since in many of the analyses above it turned out that the second initial adverbial had a causative relation with the SoA in the main clause (i.e. in example (8b) it provided a reason for the surprise expressed in the main clause and in the example in (8c) it provided a reason for why the times had changed). This neatly illustrates why it is such a complicated matter to classify adverbials according to semantic function. Furthermore, while not all compound orientations were realized by two temporal combinations, in all cases both adverbials fulfilled the same semantic function (cause-cause; condition-condition, etc.).

As the last adverbial property, layer modification presents the most striking regularities when considered in association with orientations. In Table 4.9 all rhetorical-interpersonal-predicational orders are summarized as ‘high-low’ orders, while all predicational-interpersonal-rhetorical orders are summarized as ‘low-high’. Complex beginnings consisting of two adverbials that function at the same layer, be this predicate, predicational or propositional, are summarized under ‘same layer’. All classes have a preferred layer combination. Compound and composite orientations only feature one type of combination, namely ‘same layer’. Stepwise orientations are overwhelmingly realized as high-low combinations; grounded orientations prefer a same-layer combination, again; and complex orientations prefer low-high combinations.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>combination</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stepwise</td>
<td>high – low</td>
<td>129</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>same layer</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>low – high</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Compound</td>
<td>same layer</td>
<td>17</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.9a: Layer modification in class I orientations (no grounding function for 2nd initial adverbial)
4.6 Unacceptable complex beginnings

The next issue that needs to be discussed concerns unacceptable examples of complex beginnings, such as presented in Chapter 1.2 and repeated below in (15), for convenience. In Chapter 1 one of the questions was “What sets the combinations of adjuncts in (15) apart from combinations of adjuncts such as in (16) (partly presented in Chapter 1 under [10] and [11])?” This section will address this question.

(15)a In the diversified ethics discussion, aside from the potential dangers of special problem areas (nuclear energy, genetic engineering, information technology), the possibilities for a ‘rational’ guidance of technology and a responsible self-limitation are being debated. (Ventola 1995:100)

b Of the 300 participants, in 139 cases fatigue was found. (Hannay 1994a:87)

c Nowadays, frequently preservatives, aromatic substance, colourings and flavourings are used to prolong the storage life and to improve the tastiness. (Hannay 1994a:87)

d In Russia, until recently the situation was very different. [LEC 1-4-1]
At Rochão, at about 25 min into the walk, you lose the levada. 
(Virtanen 1992:254)

b Two years ago in Dublin I said if you don't have something that is perceived to be inclusive you've had it. [NEC 479-219]

c By my Zionism, by being a conscientious committed Jew, I was uncontaminable. [NEC 220-480]

d In spite of the difficulties, by the mid-1980s scientists had managed to isolate several cell-surface adhesion receptors. [NEC 96-11]

Before discussing the differences between the examples in (15) and (16), note first of all that the problems with the examples in (15) are not all due to the same reason. Consider first the examples in (15a) and (15b). Working within the framework of Systemic Functional Grammar, Ventola suggests that (15a) is unacceptable because it is “thematic heavy, while the Rheme ['are being debated'] is practically empty of new information” (1995:100). Hannay arrives at a similar conclusion for (15b). He identifies this problem as ‘orientational overload’ – a subclass of a problem that he refers to as ‘frontal overload’ (1994a:86). In frontal overload-sentences, “the initial adjunct is followed by a focal subject and the rest of the sentence comprises nothing more than…a communicatively unimportant verb”(1994a:87). This problem is not exclusively connected to complex beginnings, however, as is shown by (17), which features just one orientation in sentence-initial position, but still is an example of frontal overload:

(17) By Western civilization the American way of life is meant. 
(Hannay 1994a:87)

Both Ventola’s and Hannay’s analyses are in keeping with two points Chafe (1980, 1987) makes on distribution of information in spoken English. In the first place, according to Chafe, speakers and hearers can only entertain a limited number of concepts in their focal consciousness at the same time (1987:22). As a result, placing too many focal concepts in initial position draws too heavily on an interpreter’s processing capacity. In the second place, ‘added information’ (that part of the intonation unit that follows the starting point) “typically” contains one new concept and if it only contains given concepts it is contrastive (Chafe
A typology of complex beginnings


This still leaves the examples in (15c) and (15d), however; these do not feature a ‘practically empty Rheme’ and do not sport any more elements in the starting point than the examples in (16) do. According to Hannay, the problem in (15c) (and by the same token in (15d), too) is that the writer “applies two different orientational frameworks [in this case two adjuncts] for contextualizing a particular message”. This results in a “top-heavy” starting point which causes “a processing overload” on the part of the interpreter (1994a:87). He refers to this particular problem as ‘orientational clash’, yet another subclass of ‘frontal overload’. However, as has been shown amply in this study, it is not necessarily the case that two orientations, even when they are both functioning at the representational level, yield an orientational clash, and Hannay’s provisional guideline that advises writers to avoid such double orientations “wherever possible” clearly overgeneralizes. See for similar advice, however, Mackenzie (1997:182), Quirk et al.(1985:651), and Leech and Svartvik (1992:201). If this advice is too general, the question then is, of course, which advice is more to the point.

A first step in the direction of an explanation lies in establishing that both (15c) and (15d) are most likely interpreted as attempts at stepwise orientations. As was discussed above, stepwise orientations are the only types of complex beginnings that actually provide two individual orientations. Obviously, such orientations are harder to process than other orientations (be they complex or single) (see Chafe’s concept of limited focal consciousness, again, and see also Hannay 1994a). It may be the case, therefore, that these truly double orientations are subject to more conditions than other orientations. This is also shown by the fact that both (15c) and (15d) can be repaired by changing the orientational type into a composite orientation or a grounded orientation respectively:

(18)a  Frequently nowadays preservatives, aromatic substance, colourings and flavourings are used to prolong the storage life and to improve the tastiness. (Hannay 1994a:87)

(d In Russia, until recently, the situation was very different. [LEC 1-4-1]

The problem with (15c) and (15d) is therefore not with the number of orientations in the sentence opening, it seems, but with the way these
orientations interrelate in a stepwise orientation and the processing capacity that is necessary to interpret them. Let us, therefore, consider the properties of all stepwise orientations, in order to find out how it is that acceptable stepwise orientations do not draw too heavily on an interpreter’s processing capacity.

There are basically two groups of stepwise orientations: those that feature a high-low combination (n=129) and those that feature a same layer combination (predicational-predicational, propositional-propositional, rhetorical-rhetorical) (n=60). I will concentrate on the 43 predicational-predicational combinations in the last group since the doubtful examples above also feature two predicational satellites. A closer analysis of these 43 complex beginnings reveals that in 41 cases the cognitive processing load of the double orientation has been reduced in some way or another, so that an interpreter can deal with the two steps in the orientation. The various ways in which this reduction is achieved are exemplified in (19) below:

(19)a Then suddenly you've got to adjust to being not important. [NEC 201-448] [9/43]
b In spite of the difficulties, by the mid-1980s scientists had managed to isolate several cell-surface adhesion receptors. [NEC 11-96] [4/43]
c In 1879, accompanied by Marie Gwinn, the “devoted companion,” Carey went off to Europe to study and received a Ph.D. from the University of Zurich in 1882. [NEC 8-67] [10/43]
d Because no one had come to form a new partnership, within 30 minutes everybody was unburdening themselves on the subject of men, women, sex, fears, expectations. [NEC 76-227] [8/43]
e On the St Petersburg waterfront, if you don’t pay off the right people, you may find that the crane operator will drop your cargo in the water. [NEC 27-138] [5/43]
f But whereas in war men are still put under very rigorous military disciplines, for which they are subjected to years of training – precisely because no conscience can withstand the bloodlust – in love all the equivalent special curbs and disciplines, devised for a comparable purpose, have been removed. [NEC 20-127] [5/43]

For the examples in (19a) and (19b), the first initial adverbial sets up a clear connection with the preceding discourse (in the same way rhetorical
satellites can), either because the semantics of the adverb phrase inherently do so (then), or because the initial adverbial makes an explicit reference. In (19b), for instance, the preceding text discussed some difficulties with regard to a particular line of investigation. The complex beginning subsequently resumes these difficulties.

In stepwise orientations such as in (19c), the first adverbial clearly provides an orientation for the entire clause, while the second adverbial can only be interpreted as selecting an element in this clause (the only entity that can be accompanied in this clause is Carey). The orientational zone built by the second adverbial is therefore nested in the zone built by the first adverbial. A similar line of reasoning applies to examples such as in (19d). In this type of stepwise orientation the first adverbial is a cause, a condition or a concession, while the second adverbial provides an orientation to the situation in which this cause, reason, or concession applies. Again, the second orientational zone is nested in the first.

In examples such as in (19e), it is the second initial adverbial that functions as condition, concession or cause. In this case the processing load has been reduced, because of the strong expectations such semantic orientations raise with regard to the type of information that can occur in the main clause. As such, the connection between the second orientation and the main clause is tighter than is the case in combinations such as until recently the situation was very different. In this sentence, an interpreter has to remember until recently as a separate concept. The examples that are similar to the one in (19f) also have a reduced processing load as a result of the second adverbial. In these cases it is not the strong tie between the adverbial and the main clause that does the trick, however, but the resumptive relation between the second adverbial and the first adverbial. In this particular example in love clearly relates to in war.

In total the stepwise orientations that fall in the classes exemplified in (19) constitute 41 out of 43 stepwise orientations that consist of two predicational satellites. This leaves us with just two more examples, which are presented below:

(20) a  ?At the moment, at night I'm taking more asthma drugs to help me breathe more easily. [NEC 403-177]

b  ?As a child, one day she saw the hoodoo man leaving her home. [NEC 401-176]
In neither of the combinations in (20) is the processing load of the double orientation diminished. The first two orientations in these examples (At the moment and as a child, respectively) create zones that have an air of definitiveness about them that does not easily allow for the definition of a more specific orientation within the frames that were already established by At the moment or As a child. It is hard to view at night as nested in At the moment, for instance. Not surprisingly, therefore, these examples qualify as orientational clashes.

In sum, it seems that since stepwise orientations truly feature two individual orientations to the clause, a text receiver can only comfortably interpret these when at least the processing capacity for one of the two is reduced. As the examples in (19) show, there are various mechanisms for this reduction process available. When the processing load of the complex beginning is not reduced, the starting point of the sentence does not help with the interpretation of the subsequent clause anymore. Clearly, this is an unwanted situation, because helping interpret the main clause is exactly what orientations are supposed to do.

4.7 Complex beginnings with three adverbials

Besides the 496 complex beginnings consisting of two adverbials, the NEC also contains 31 complex beginnings consisting of three adverbials. Their number was too small to allow for a meaningful statistical analysis, but a discussion of some examples will show that the five types of complex beginnings distinguished above also return in these combinations. Consider first the following two complex beginnings:

(21) a Later, in America during the 1930s, she traveled to the southern cotton fields, lending support to striking farmers. [NEC 1-3]

b And then at Irwin’s, standing at the bar chatting with Pearl and nodding and listening to men he knows from work and others he knows solely from having drunk with them, workingmen and out-of-work men and a few old drunks who once had been workingmen, he felt that heavy bubble there, too. [NEC 6-7]

In (21a) the second and third initial adverbial together form a composite orientation. This composite orientation, in turn, functions as the second “unit” in a grounding orientation. In (21b) it is the first two adverbials that together form a composite orientation and in this case this combination
functions as the first ‘unit’ in a stepwise orientation (the long third initial adverbial selects he [the protagonist in the novel] from the main clause and provides an orientation for his circumstances).

The examples in (22) feature complex beginnings involving compound orientations:

(22)a Coming from a tradition of romantic friendship between women that was widespread in America since the country's beginning, being generally unaware that same-sex relationships were already being called "abnormal" and "unhealthy" among sexuologists, knowing that for practical reasons they must not marry if they wanted careers, it was probably neither morally nor emotionally difficult for these women to attach themselves to each other. [NEC 8-8]

b 'If things fall apart, from whatever background you are, whatever your condition, this is where you come to. [NEC 214-31]

In (22a) all initial adverbials select these women in the main clause and the complex beginning can therefore be analyzed as an extended compound orientation. In the example in (22b), the second and the third initial adverbial together form a compound orientation for you, while If things fall apart functions as an orientation for both the main clause and the compound orientation together. In other words, the compound orientation functions here as the second part of a stepwise orientation (and the orientational zone built by the compound orientation falls within the zone built by the conditional first orientation, in that way decreasing the processing load of this stepwise orientation).

In (23a) again we have a stepwise orientation, the first part of which consists of a complex orientation (Now, however). In this stepwise orientation, too, the processing load is diminished as a result of the fact that with typical boldness is nested in the orientation provided by Now, however. Note furthermore that no actual example of a complex orientation forming the second half of a stepwise orientation was encountered, but that English does allow such constructions, as is shown by (23b).

(23)a Now, however, with typical boldness, he has put his head above the parapet once more. [NEC 32-220]
b However, in Britain, of course, people did things differently

[constructed example]

The two examples in (24) are the only two complex beginnings that consist of a combination of two stepwise orientations:

(24)a For example, although it is known that Jane and wealthy philanthropist Mary Rozet Smith, who later became her "devoted companion" (as biographers must acknowledge), always slept in the same room and in the same bed, and when they traveled Jane even wired ahead to be sure they would get a hotel room with a double bed, nevertheless most historians have preferred to present Addams as asexual. [NEC 8-7]

b After all, when society suddenly saw fit to decree that sexual acts for which over many centuries people were sent to prison (or worse) in this world, and to hell in the next were now to be regarded not only as legal but perfectly acceptable, surely this was bound to suggest that lots of other anti-social acts could now be committed with equal impunity. [NEC 10-20]

In both sentences the third initial adverbial provides an orientation for the main clause, while the second initial adverbial provides an orientation for the combinations of the third adverbial and the main clause. The first initial adverbial, in its turn, provides an orientation for this larger combination again. In both cases the third initial adverbial is of the type we saw earlier in (19f): it resumes information provided by the second orientation. At the same time, both examples start with an adverbial that is inherently grounded already. This means that in these examples, too, the processing load of the complex beginning has been considerably reduced in more than one way.

4.8 Summary

This chapter has shown that complex beginnings can be subclassified in two steps. The first step assigns complex beginnings to one of two classes based on the grounding functionality of the second adverbial. The second step subclassifies complex beginnings in both main classes based on the relations between the first adverbial, the second adverbial and the main
clause. This yielded five types of complex beginnings. It was subsequently shown that the examples that were assigned to a specific type were remarkably similar to each other with regard to semantic function, syntactic realization and layer modification.

Furthermore, the different types of complex beginnings were applied to doubtful examples of stepwise orientations and to complex beginnings consisting of more than two adverbials. An important observation in these two exercises was that the conditions imposed on stepwise orientations are more rigorous than those on other orientations, due to the fact that stepwise orientations are the only truly double orientations and are therefore perhaps harder to process than other orientations (in which the two adverbials in the orientation always stand in some kind of a relationship to each other). On the whole, the observations discussed in this chapter seem to indicate that this typology of complex beginnings has adequate explanatory power and I will therefore accept it as an answer to question A formulated in Chapter 1: ‘What types of complex beginnings occur in English?’ In Chapter 5, subsequently, question B will be addressed: ‘What discourse functions do complex beginnings have?’
5

The discourse functions of complex beginnings

5.1 Introduction

Chapter 4 answered the first question that was raised in Chapter 1, namely ‘What types of complex beginnings occur in English?’ The current chapter will address the second question: ‘What discourse functions do complex beginnings have?’ It will do this by examining three properties that may indicate such a function: the position in the text, preference for genre and, most importantly, the textual fit of the sentence introduced by the complex beginning.

Section 5.2 will examine the first property: the position in the text. If it can be shown that complex beginnings tend to occur on boundaries of major text units (for instance, at paragraph-initial and paragraph-final position) then this is an indication of a possible discourse function. Section 5.3 will then examine the second property, namely preference for genre. Various researchers (Berry 1995, Ghadessy 1995, Virtanen 1992:144ff) have shown that the genre to which a text is intended to belong restricts a text producer’s choice of sentence-initial elements. For instance, informational texts tend to have few interpersonal and many representational elements in sentence-initial position (Berry 1995). If it can be shown that the individual genres in the Native English Corpus (NEC) prefer one type of complex beginning over another, then consequently this may also be considered an indication of a discourse function of complex beginnings.

Finally, and most importantly, Sections 5.4 through 5.7 will examine how the internal order of a complex beginning influences the textual fit of a sentence (Enkvist 1981:99). As a starting point for this examination Section 5.4 will introduce Virtanen’s theory (1992) on discourse functions of spatio-temporal complex beginnings in English. Section 5.5 will then apply Virtanen’s hypotheses to spatio-temporal combinations encountered in the NEC, while Sections 5.6 and 5.7 will extend the hypotheses by applying them to other types of complex beginnings. The
results of the case studies in these sections and the results of analyses reported in Sections 5.2 and 5.3 will then be generalized in Section 5.8, which will present a statistical analysis of the contexts of 45 randomly selected complex beginnings. Finally, Section 5.9 will address the implications that the ordering principles for complex beginnings may have for a description of the structure of sentence openings.

5.2 The text position of complex beginnings
It has been observed before that sentence-initial adverbials functioning as orientations often occur at boundaries of major text units. Such adverbials have been referred to as for instance *episode boundary markers* (Van Dijk 1982), and *topic boundary markers* (Brown and Yule 1983:94-100). Since complex beginnings are combinations of orientations, it may be expected that they, too, generally occur at such major boundaries, especially since Givón has suggested that the number of orientations that function in textual structures may be greater at the boundaries of major textual units (e.g. paragraphs) than in between minor units of the texts (e.g. sentences) (Givón 1984:245-246). As Table 5.1a shows, this is indeed the case. An average paragraph in the NEC-texts contains 4 sentences (based on a count in a random selection of 50 texts in the NEC). One of these four is the first sentence and another is the final sentence, leaving two sentences for paragraph-medial positions. That means that if the 496 complex beginnings were randomly distributed over all paragraph positions, this would have resulted in 124 complex beginnings in paragraph-initial sentences (a quarter of all complex beginnings), 124 complex beginnings in paragraph-final sentences (again, a quarter) and 248 complex beginnings in other sentences (half of all complex beginnings). Instead, 161 complex beginnings occurred in first sentences (37 more than expected) and only 209 occurred in medial sentences (37 fewer than expected). This observation suggests that complex beginnings are a little more often used to fit larger text chunks such as paragraphs in their contexts.¹
The discourse functions of complex beginnings

Now consider Table 5.1b, in which the text position of each of the five types of complex beginnings is given:

<table>
<thead>
<tr>
<th></th>
<th>paragraph-initial position (including text-initial)</th>
<th>paragraph-medial</th>
<th>paragraph-final position (including text-final)</th>
<th>Tot</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>obs.</strong></td>
<td>161 (33%)</td>
<td>209 (42%)</td>
<td>126 (25%)</td>
<td>496</td>
</tr>
<tr>
<td><strong>exp.</strong></td>
<td>124 (25%)</td>
<td>248 (50%)</td>
<td>124 (25%)</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2(2) = 17.21, \ p < .001 \text{ and } C = .18 \]

Table 5.1a: Text position of all complex beginnings

Now consider Table 5.1b, in which the text position of each of the five types of complex beginnings is given:

<table>
<thead>
<tr>
<th></th>
<th>paragraph-initial position (including text-initial)</th>
<th>paragraph-medial</th>
<th>paragraph-final position (including text-final)</th>
<th>Tot</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>stepwise</strong></td>
<td>58 (62)</td>
<td>78 (81)</td>
<td>56 (49)</td>
<td>192</td>
</tr>
<tr>
<td><strong>compound</strong></td>
<td>5 (6)</td>
<td>10 (7)</td>
<td>2 (4)</td>
<td>17</td>
</tr>
<tr>
<td><strong>grounded</strong></td>
<td>39 (31)</td>
<td>41 (40)</td>
<td>15 (24)</td>
<td>95</td>
</tr>
<tr>
<td><strong>complex</strong></td>
<td>48 (55)</td>
<td>69 (71)</td>
<td>51 (43)</td>
<td>168</td>
</tr>
<tr>
<td><strong>composite</strong></td>
<td>11 (8)</td>
<td>11 (10)</td>
<td>2 (6)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>161</td>
<td>209</td>
<td>126</td>
<td>496</td>
</tr>
</tbody>
</table>

\[ \chi^2(8) = 16.14, \ p = .040 \text{ and } C = .18 \]

Table 5.1b: Text position of the five types of complex beginnings
While for each category the number of examples that actually occurs in paragraph-medial position is more or less in accordance with the number of examples that is expected (given the 161-209-126 distribution), there are some discrepancies between observed and expected frequencies with regard to paragraph-initial and paragraph-final position: grounded orientations occur more than expected at the beginning of paragraphs; stepwise and complex orientations on the other hand occur more often than expected at the end of paragraphs. These observations will be discussed further in Section 5.8, after other discourse functions of complex beginnings have been examined.

5.3 Complex beginnings per genre
Several researchers have pointed out the association between sentence openings and genre (Berry 1995, Ghadessy 1995, Virtanen 1992:144ff). The genre to which a text is intended to belong restricts a text producer’s choice of sentence-initial elements. It is therefore interesting to examine whether complex beginnings in general can be associated with specific genres, and also whether it is possible to associate specific types of complex beginnings (i.e. stepwise orientations, complex orientations, grounded orientations) with specific genres. The first question was answered in Chapter 3 already, when the NEC was first introduced: academic texts contain more complex beginnings per 100 sentences than the texts in the News and Fiction corpora. If we then look at the types of complex beginnings that occur in the three text genres, we find that Academic texts not only contain more complex beginnings in general per 100 sentences, but that they specifically contain a higher number of stepwise and complex orientations than can be expected, had they been distributed randomly. These texts furthermore contain fewer grounded orientations (Table 5.2). Fiction texts, on the other hand, contain a higher number of grounded orientations and a lower number of both stepwise and complex orientations (see also Gustafsson 1983:11 for similar counts). In itself this observation is not too surprising: both complex and stepwise orientations often contain rhetorical satellites (see Chapter 3) and it seems logical that this type of satellite is common in academic texts, where logical structure and explication are essential features (see e.g. Gustafsson 1983:9-10).
5.4 Discourse functions of adverbial placement in English

In order to be able to examine the textual fit of sentences starting with a complex beginning, I will introduce Virtanen’s theory of discourse functions of adverbial placement in English. Virtanen (1992) examined clause-initial elements (including adverbials) of TIME and PLACE in narratives and in procedural place descriptions. In her data she also encountered some examples of complex beginnings. Based on her case studies, she formulated a hypothesis on the discourse mechanisms that drive the relative order of the elements in these spatio-temporal combinations.

A key notion in Virtanen’s theory is the concept of Text Strategic Continuity (henceforth TSC), which she defines as a “uniform text-structuring orientation chosen to attain, in view of the communicative goal, a maximally profitable text organization, for the benefit of the text receiver.” (1992:51, 85). A TSC, in other words, “bind[s] the text together” (1992:89) by using similar orientations for sentences in a text. As a result it creates cohesion and coherence (1992:90). Virtanen distinguishes various types of TSCs, namely TSCs of time, of place, of participant, of topic, of action and of theme. Consider her examples in (1), (2) and (3) (1992:254). The passage in (1) is structured according to a spatial TSC, while the passages in (2) and (3) are structured according to a temporal TSC. These two types of TSC are the most interesting for the
current study, since orientations that function in spatial or temporal chains are most likely to be realized by sentence-initial adverbials (unlike participant TSCs, topic TSCs and action TSCs). Only the passages in (2) and (3) contain complex orientations. The complex beginnings in (2) can be classified as grounded orientations. The complex beginning in (3) can be classified as a stepwise orientation, but notice that, for all the reasons indicated in Chapter 4, it borders on an orientational clash. In these and other examples in this chapter ‘---’ indicates that the original passage is not presented in full.

(1) From the entrance, on the r. is a GUERNSEY KITCHEN of a hundred years ago, with a lady taking a loaf of bread out of the furze oven, a table set for dinner ---. Opposite the front door is a glass case containing a large china doll in christening robes---. On the l. side is a VICTORIAN BEDROOM with models of a farmer’s wife in a half tester bed with her new baby. Her small son and the midwife stand nearby. All are dressed in period cloths. On the day bed is laid a baby’s layette and other items include cradle, hipbath, commode and early feeding bottle. In the room off to the l. is a temporary exhibition which changes its theme annually --- [McGregor 1981, 69-70]

(2) Start your walk behind the church, --- Take the cobbled road uphill to the left, --- In 13 min you will reach the crossing of the levada; --- Turn right --- At about 25 min into the walk, at Rochão you lose the levada. Continue up the cobbled path, --- In 45 min you come to the head of a very deep U-turn in the especially lovely valley of the Ribeira do Porto Novo--- At 1 h 40 min, enjoy the rush of the Levada do Pico crossing your path, just before a track down to Aguas Mansas. At 2 h 35 min, after passing the wide and pleasant Boaventura river valley you’ll reach the best picnic spot on the walk --- [1992:254]

(3) In 1935 Labour returned to office and when Peter Fraser, later Prime Minister, became Minister of Education, with Dr Beeby as Directory of Education, substantial changes were introduced. Secondary schools became universal and free, and universities
accepted all those who had passed the school certificate and were “accredited” by their secondary schools. A minority of candidates who were not accredited could take a university entrance examination, but the main responsibility for the choice of university entrants lay with the schools. In the secondary schools, from 1945 there has been a broad curriculum. In 1962 the Currie Commission reappraised the system, and --- [Times Literary Supplement 21/9/73:1098]

Consider first the relative order of the adverbials in the two complex beginnings in the passage in (2). Both have a temporal adverbial in first initial position and a spatial one in second initial position. Virtanen hypothesizes that this order is the result of the fact that the text is structured according to a temporal TSC, and that therefore the temporal adverbials precede the spatial ones.\(^6\) This means that the first adverbial not only provides an orientation for the sentence itself; it is also responsible for how well the sentence as a whole fits in the surrounding text. Should the two adverbials be reversed, the text receiver would have a harder time interpreting the sentence. It would require more energy to add these sentences to the structure of the preceding discourse.

Notice that in these passages both second adverbials ground the first adverbial in a way that is particular to procedural place descriptions. The second adverbials relate the point in time to a concrete spatial concept that may be unknown to the Addressee at the moment of reading the text. However, the writer intended the Addressee to read this text while actually walking and at one point or another Rochão and the Boaventura river valley should become part of the discourse environment. As a result, the notions \textit{At about 25min into the walk} and \textit{At 2h35min} are related to a Given concept, i.e. a concept whose relevance is clear in the immediate discourse context. This grounding of a temporal concept by a spatial one is crucial in this type of text. After all, not every hiker goes at the same pace and not every one may have reached Rochão after exactly 25 minutes. The connection between the two is therefore necessary or the reader may be literally lost.

Now consider the passage in (3). Interestingly enough, this passage is considered to be structured by a temporal TSC, even though two sentences start with a spatial element, namely \textit{Secondary schools} and \textit{In the secondary schools}. However, while the entire text from which this
passage is lifted is structured with the help of temporal adverbials, only the few lines from *Secondary schools to broad curriculum* are structured with the help of spatial orientations. The temporal TSC therefore functions as a global TSC, while the spatial strategy functions as a local TSC. Virtanen refers to these changes in TSC as *breaks* (1992:90). In (3), the constituent *In the secondary schools* constitutes such a break. When, on the other hand, the scene is taken from one time to another (from one place to another, from one participant to another, etc.) but remains within the same TSC, this is called *a shift*: (1992:88). In (1), (2) and (3) elements such as *on the day bed, in 13 minutes, In 1935,* etc. are all shifts: the reader is taken to a different point in space or time but remains within the same TSC. According to Virtanen, the order of the adverbials that both function in a TSC is governed by the degree of givenness of the two TSCs (note that Virtanen uses ‘given’ to indicate degree of activity in the Addressee’s mind, in contrast to Fox and Thompson’s use of Given as ‘a referent whose relevance is clear’ [see Chapter 3]). Since the spatial TSC “forms a local link in a text [and] refers to the immediately preceding textual context”, it is more active in the Addressee’s mind than the temporal TSC. The adverbial “conveying the local link is thus more activated than the one indicating a global shift” (1992:255) and it is therefore better suited to be used as a means to incorporate the new information in the discourse representation of the text receiver. In short, the considerations that underlie both ordering principles rely on a rather sophisticated discourse competence. A text producer will have to be able to organize a text according to a TSC, determine which element functions in the most local TSC and base the order in the complex beginning on the outcome of these considerations.

Two different ordering principles can be deduced from Virtanen’s case-studies (1992:254):

(4) a Adverbials that participate in a TSC \^ adverbials that do not participate in a TSC
b Adverbials that participate in a local TSC \^ adverbials that participate in a global TSC

Combination of the two ordering principles yields the following general principle for the internal order of complex beginnings:
(5)  local strategy adverbials ^ global strategy adverbials ^ other adverbials (Virtanen 1992:254)

This principle suggests that the internal order of complex beginnings is discourse-driven and this, in turn, implies that complex beginnings have a task in the organization of the discourse. Virtanen based her theory on combinations of spatial and temporal adverbials that function in a grounded or stepwise orientation. Section 5.5 below will test her hypothesis on composite orientations, which are also spatio-temporal combinations. Sections 5.6 and 5.7 will then attempt to extend the analysis to other types of combinations.

5.5 Spatio-temporal and temporal-spatial complex beginnings
For a first test of Virtanen’s hypothesis on the internal order of complex beginnings, consider the composite orientation That night at church in (6) below:

(6)  When we got home my father was watching television. It was the match between ‘Crusher Williams’ and one-eyed Jonney Scott. My mother was furious; ---
     That night at church we had a visiting speaker, Pastor Finch from Stockport. He was an expert in demons, and delivered a terrifying sermon on ---
     After the service we were having a banquet; my mother --- [NEC 6-82]

The complex beginning consists of a temporal adverbial followed by a spatial adverbial, an order which follows Virtanen’s prediction: the text is globally structured according to a temporal strategy, while the spatial adverbial does not function in a TSC. The order in the complex beginning can therefore be represented as ‘global TSC’ followed by ‘other adverbial’ and that fits the principle formulated in (5) (and therefore also the one formulated in [4a]).

Now consider In Italy in the latter part of the 19th century in the passage in (7). This is again a composite orientation, consisting of a spatial orientation followed by a temporal one. In this passage, all references to temporal concepts are in italics; all references to spatial
(7) Hired support for a performer descends from classical antiquity, but it was the French who began the systematic use of claques; there was once even an agency for them, called L'Assurance des Succes Dramatiques. Different names graced the different activities. Among these the pleureurs concealed smelling salts to induce crying, the connoisseurs interjected knowing exclamations of approval, the bisseurs called for encores and the commissaires held forth on the merits of singers during intervals.

In Italy in the latter part of the 19th century there was a tariff of services: 25 lire for applause on entry to the stage, 5 for a bravo, 50 for 'wild enthusiasm', etc. Their equivalents in England were sadly lacking in such sophistication. According to the Musical Times of 1888, 'claques have not laid their plans with any degree of taste and judgment like their Gallic prototypes. They have no bureau where things can be amicably settled beforehand, but resort to waiting at stage doors with doubled fists and thick sticks, ready to employ either or both upon the persons who decline their services.'

At the Vienna State Opera claques also operated until the war, since when booing has usually focused on one clear objective: to rid the house of its reform-minded music directors. Both Lorin Maazel and Claudio Abbado were forced out in part by the ultra-reactionary members of the Stehplatz, the standing room area behind the stalls.

Only in Italy are descendants of the centuries-old 'official' claques still 'employed' by opera house managements, although payment now comes in the form of free entry to the Loggione.

None of the temporal references in (7) are in sentence-initial position, and this suggests that the text is not organized with the help of a temporal TSC. By contrast, most spatial references are placed sentence-initially and many are also placed paragraph-initially, which means that the text is organized with the help of a spatial TSC. Again, therefore, the internal order of the complex beginning in this passage is discourse-driven with the spatial TSC element In Italy preceding the temporal element in the
latter part of the 19th century and with the temporal element fulfilling a grounding function with regard to the spatial one: not just in Italy but in Italy in a particular period.

Notice by the way how deftly this spatial TSC was introduced in the text. The first sentence in this passage, the topic sentence, introduces the subject matter of the text, namely ‘hired support for performers’. In the predicate of this first main clause the origin of the notion of this topic is mentioned but then by contrast the next clause introduces the French as the real origin. This contrast is made explicit with the help of a conjunction, but the writer chose to emphasize it even more by constructing a cleft sentence (*The French, however, were the first to...would have done as well*). Interestingly enough, despite the fact that the French is not in sentence-initial position in this cleft sentence, it should, according to Halliday (1994:60), still be analyzed as part of the Theme. The relative clause characterizing the Head (*who began the systematic use of the claques*) is then part of the Rheme. As a result this sentence sports an initiator of a TSC in non-sentence-initial position, but still in the Thematic, and therefore orientational, part of the sentence. This construction eases the reader’s task to grasp the fact that the introduction of the French is relevant in this discourse and it is as a result easy to accept a spatial strategy based on these French as an organizer for the rest of the text.

The two examples above support Virtanen’s first ordering principle mentioned in (4a). As far as the second principle in (4b) is concerned, however, no instances of global-local or local-global combinations were encountered among the spatio-temporal/temporal-spatial examples in the NEC, and as a result a test of this principle will have to be performed on other types of complex beginnings. Section 5.6 will therefore continue with an examination of contexts of several stepwise and complex orientations while Section 5.7 will deal with contexts of stepwise and grounded orientations.

5.6 Stepwise orientations versus complex orientations
This section will compare the contexts of stepwise orientations that consist of a rhetorical satellite followed by an interpersonal or representational satellite with the contexts of complex orientations that consist of an interpersonal or representational satellite followed by a rhetorical satellite. Comparing the contexts of these orientations is
particularly advantageous, since the two types potentially form a minimal pair. That is, with minimal changes (only reversal of the satellites is involved) the stepwise orientation (e.g. However, in 1996) may be turned into a complex orientation (e.g. In 1996, however).

Consider the two complex beginnings in (8). Both are stepwise orientations, and viewed solely from a sentence perspective, both could also have been realized as complex orientations:

(8)  
**The view of crime as illness**, or at least as physiological abnormality, implies that it is individuals who need treatment, rather than society which needs reformation, an idea that has long been anathema to good, right-thinking liberals.  
**However, if such a view becomes the orthodoxy**, in the way that 'crime as response to social conditions' was once an orthodoxy, it will also not be long before ---  
**Of course, as every doctor knows and recognizes**, the brain is the seat of thought, and if the brain is damaged --- **However**, this argument cannot be taken too far, for - if taken to its logical conclusion - it utterly destroys --- [NEC 112-318]

The passage in (8) is organized as follows: A specific view on an issue, namely the view of crime as an illness initiates an argument. Following that view to its logical conclusion leads to a counterargument (**However, if such a view becomes the orthodoxy**). The counterargument is then mitigated somewhat with the help of *of course, as every doctor knows and recognizes*, but then **However, this argument** leads the interpreter back to the original opposition. In other words, the theme of the text is a particular view on crime, with a treatment of the pros and cons. In this study, such organizational structures will be referred to as **rhetorical TSCs**.

The two complex beginnings support this rhetorical TSC. Had, for instance, the stepwise orientation of the first complex beginning (**However, if this view becomes the orthodoxy**) been reversed to a complex orientation (**If this view becomes the orthodoxy, however**), this may have led the reader to expect the text to develop according to a topical TSC, sporting a comparison of several views on crime (crime as an illness, crime as a social construct, crime as a choice, etc.) Had *of course, as every doctor knows and recognizes* been presented as *As every*
doctor knows and recognises, of course, then the reader may have expected the rest of the text to develop according to a participant TSC, comparing the views of different groups of people (judges, the man in the street, victims of crimes, etc). As it is, however, the stepwise orientations place the rhetorical adverbial in absolute initial position and the result is: (1) the sentences support the earlier initiated rhetorical structure of the text and (2) the sentences raise the expectation that this structure is going to be continued. The textual fit of the sentences is thus decidedly better when the stepwise orientations are maintained.

Consider now the example in (9) below. This passage features a complex orientation:

(9) **In those days** fashion was essentially high fashion --- and not really intended for the masses, let alone the young. ---
But then: 'Dra-a-a-a-a-a-ng! She loves you, yeah, yeah, yeah.' Alexander Plunket Greene, husband of Mary Quant, called the mini-skirted Sixties 'the democratisation of fashion', and so they were. ---
Shrimpton, in fact, was originally of the long gloves and demure knees Lucie Clayton school of modelling but, by 1965, along with her fashionably oik boyfriend, Terence Stamp, she was the first of the Beautiful People. ---
**Right through the following decade** [the seventies], what models mostly helped to sell was fairly anonymous High Street schmutter – inexpensive Paris knock-offs in the main. **By the early Eighties, however** the spiffy ready-to-wear was coming out of New York and Milan. What a marvellous wheeze – designer exclusivity available worldwide! --- [NEC 89-258]

The text is clearly structured according to a temporal TSC (global) and *by the early Eighties* functions in this TSC, while *however* does not. By the time the text receiver has arrived at *By the early Eighties* it is well-established that new episodes in the narrative are introduced with a temporal orientation. The reader might even have expected this exact time frame already, as a result of the enumeration of the mini-skirted Sixties, right through the following decade (i.e. the Seventies), *by the early Eighties* and it therefore provides both a clear handle for the interpretation of the sentence and the way the sentence should be fit into the framework of the discourse. Again, the second adverbial *however* is
used to ground the first adverbial and it helps the reader understand the relevance of being taken to this particular point in time in the active TSC: in the Eighties something different happened and however indicates right away that this new period should be approached from that angle.

In the passage in (9) a stepwise orientation would have been a less effective choice. However does not function in a text-structuring TSC and it may therefore put the reader on the wrong foot. The analyses of the passages in (10) and (11) below function as further arguments in support of the TSC ordering hypothesis. Consider in this respect first Hartnett’s analysis of the passage in (10) (1995:201):

(10) I was told later that, a son having been more desired, my arrival as the first-born had given rise to some disappointment. My father, however, showed more satisfaction at the event than all the rest of the entourage.

The text from which this is taken is structured according to a participant TSC, which is initiated by My father. The rest of the text details a sequence of other caregivers and their feelings towards the author’s birth. Every time a new caregiver is introduced, a shift in the TSC is achieved. Had the second sentence started with However, my father the sentence would not have fit as nicely in the text. While the reader might still have inferred the correct meaning of the sentence, namely the contrast between the author’s father and stereotypical fathers who allegedly prefer their first-born to be a son, he might also have inferred wrongly that the rest of the text was going to be developed based on this contrast, or – in other words – according to a rhetorical strategy. As it is, however, the contrast only encompasses one discourse act and, as a result, however does not function in a TSC.

The examples above all confirm Virtanen’s first ordering principle, namely adverbials that function in a TSC should precede those that do not function in a TSC. One of the complex beginnings in the example in (11) below illustrates Virtanen’s second ordering principle, namely ‘local strategy adverbials precede global strategy adverbials’ (in this passage the inserted numbers in square brackets are mine). Consider first the complex orientation In western Russia, in fact. This is the second complex beginning in this passage.
As incredible as it may seem with all the precipitation, the soil in North America, southern Europe and in several other places is actually expected to become drier in the coming decades. Dry soil is of particular concern because of its far-reaching effects, for instance, on crop yields, groundwater resources, lake and river ecosystems and even on down to the foundations of buildings. Higher temperatures dry the soil by boosting the rates of evaporation and transpiration through plants. Several models now project significant increases in the severity of drought. Tempering these predictions, however, are studies of drought frequency and intensity during this century, which suggest that at least during the early stages of global warming other factors have overwhelmed the drying effects of warmer weather. For example, in the U.S. and the former U.S.S.R., increases in cloud cover during the past several decades have led to reduced evaporation. In western Russia, in fact, soil moisture has increased. This text is globally structured according to a rhetorical TSC: Sentence [1a] asserts that the world will become drier, the gravity of which is explained in [1b] and [1c]. [1d] then provides arguments for why [1a] would be true: several models say so. Sentence [2a] consequently contradicts the assertion made in [1a], and [2b] provides the argument for this contradiction: other models say the world has not become drier yet as a result of other factors. These factors are then exemplified in [2c-1]. Sentence [2c-1] not only states that the rhetorical status of the sentence is ‘example’. Its orientation also includes an indication of where the examples are set (in the U.S. and the former U.S.S.R.). This last orientation, in its turn, initiates a local strategy, which is picked up by In western Russia, the first adverbial in the second complex orientation. The second adverbial in this orientation, in fact, functions in the global rhetorical chain again. Thus in this last complex beginning, we have an adverbial functioning in a local TSC followed by an adverbial that functions in a global TSC, and this order fits Virtanen’s prediction. However, now consider the first complex beginning in this passage: For example, in the U.S. and the former U.S.S.R. As stated above, here we have an adverbial functioning in the global TSC that precedes, rather than follows, the adverbial that initiates and therefore functions in the local
TSC. This suggests that ‘local’ precedes ‘global’ is too general a statement. I will return to this in Section 5.8.

The examples above were all clear-cut cases. The TSCs were easily identified and the order of the adverbials in the complex beginnings could be related to them. Consider, however, the complex orientations in the two passages in (12a) and (12b):

(12) a Observations over land areas during the latter half of this century indicate that the minimum temperature has increased at a rate more than 50 percent greater than that of the maximum. This increase has lengthened the frost-free season in many parts of the U.S.; in the Northeast, for example, the frost free season now begins an average of 11 days earlier than it did during the 1950s. A longer frost free season can be beneficial for...

b Terrible as hurricanes and typhoons are, not all the consequences of these weather extremes are negative. In some rather arid regions the contribution of tropical cyclones to rainfall is crucial. In Northwest Australia, for example, 20 to 50 percent of the annual rainfall is associated with tropical cyclones.

In both passages the author chose a complex orientation and for instance for the passage in (12a) this can be defended by pointing at in many parts of the U.S. which set up a local spatial TSC in which in the Northeast functions. However, it is equally possible to interpret in many parts of the U.S. as the initiator of a well-established type of rhetorical strategy in which a general statement is followed by an example. This would result in For example, in the Northeast... Both from a grammatical point of view as well as from a discourse point of view, the two options are equally acceptable. A similar case can be made for the complex beginning in example (12b). The author chose a complex orientation that supported the spatial TSC initiated by in some rather arid regions. Again, however, production of a stepwise orientation in this passage can be defended as well. In that case, some in in some rather arid regions initiates a rhetorical TSC and the rhetorical satellite For example subsequently supports this strategy by selecting one particular region from the initial set of some regions. This last example is included in an experiment, to be described in Chapters 8 and 9. I will return to it there.
5.7 Stepwise orientation versus grounded orientations

While high-low stepwise orientations potentially form a minimal pair with complex orientations, same-level stepwise orientations often form a minimal pair with grounded orientations, and this section will therefore compare the contexts of these types of examples. Consider the examples in (13) and (14). Both passages feature a situation in which a grounded orientation was preferred over a stepwise orientation.

(13) **Whereas in the early Eighties** violence committed by 10-16-year-olds remained static, **from 1987 onwards** it has increased by 37 per cent - while all other types of juvenile crime have actually been dropping. **Today's juveniles** are twice as likely as their elder brothers to opt for violence over other kinds of crime. The proportion of all juvenile crime that is violent has increased from six per cent **in 1987** to 11 per cent **in 1993**.

In fact, because of demographic shifts, juvenile violence should have been falling in this period. **In 1993, because of the drop in the birth rate in the Seventies** there were actually one fifth less young people in Britain than in 1987. As you would expect, juvenile theft did decrease - by 40 per cent. Yet, as we saw, juvenile violence increased by nearly the same amount - despite that decline in the numbers of young people. [NEC 110-312]

(14) 'I grew up to despise the judges, police and psychiatrists and ceased to have much respect for the law. Democracy and human rights were a myth for gay people just as the 'Lucky Country' was a myth for poor families like mine.' He was to say later of his homosexuality: **Initially, because of my strict Protestant upbringing** I was resistant to accepting my homosexuality. But **then** I met a very special man.' [NEC 79-232]

Both passages are structured according to a temporal TSC and it is not surprising, therefore, that in both passages the absolute initial element in the complex beginning functions in this TSC. Notice that again the second adverbials have a grounding function with regard to the first adverbials. In the passage in (13), for instance, 1993 is a relevant year because by then the babies born in the seventies were adolescents and
potentially involved in juvenile crime. A similar analysis applies to the passage in (14).

Let us, as a final illustration, turn to some examples of stepwise orientations that are potential grounded orientations:

(15) If this had been a social occasion organised by a dating agency, one could imagine the form: hesitant getting-to-know-you conversations about careers and interests, moving towards the inevitable story of The Divorce. But it wasn’t like that at all. Because no one had come to form a new partnership, within 30 minutes everybody was unburdening themselves on the subject of men, women, sex, fears, expectations. [NEC 76-227]

(16) There is no higher point to a program that says ‘Duplicate Me’. But if an effective ‘Duplicate Me’ program happens to come into existence, for whatever reason, it will be duplicated and then there will be two of them. Each of the two, being an exact copy of the original, obviously also says ‘Duplicate Me’. When these two are obeyed, there will be four. If the process goes on as slowly as one generation per hour, after a single day the number of duplicates will be 100 million; after three days the number will be so large that, tiny as viruses are, if they were laid end to end they would stretch to the Moon and back 100 million times. [NEC 30-144]

In both examples above a rhetorical structure is adapted. In (15) the first sentence presents a hypothetical situation. The second sentence then denies this situation and the third sentence presents this denial of the situation as the reason for why things went the way they went. In this complex beginning the absolute initial adverbial functions in the TSC again, whereas the second adverbial does not. Now consider the complex beginning in the passage in (16). In this case, too, the if-clause in the complex beginning continues a line of reasoning that was set up in the preceding discourse. Notice by the way that after a single day initiates a local TSC again, which is picked up by after three days.

Before moving on to a quantitative test of the discourse-driven ordering hypothesis, two points should be made. In the first place, one specific type of orientation, namely the compound orientation, was not
examined in the examples above. These orientations were left out of this discussion because they cannot be expected to be driven by a principle that is essentially based on the semantic function of the adverbial (PLACE, TIME, etc.). The reason for this is that the most important characteristic of compound orientations is that both parts fulfill the same semantic function (see Chapter 4). If the first part functions in the TSC, therefore, so does the second.

In the second place, not all complex beginnings in the major types form one half of a minimal pair. Some complex orientations cannot be reversed to form a stepwise orientation because the rhetorical adverbial in second initial position (e.g. though) cannot end up in first initial position. Conversely, stepwise orientations which have for instance Thus or Hence in first initial position cannot be reversed into complex orientations either. It is nevertheless also interesting to consider the order in these complex beginnings because the selection of these adverbials implies a choice as well. Should a language user want to change In Britain, though into a stepwise orientation – for instance because in Britain does not need grounding, or because the text is organized according to a rhetorical TSC rather than a spatial one – it is easy enough to replace though with, for instance, however. Should there be a need to change Thus, in Britain into a complex orientation it is possible to replace thus with a closely related satellite such as therefore, yielding In Britain, therefore.

5.8 Statistical illustration of TSCs
Sections 5.5 through 5.7 presented a small number of case studies of complex beginnings. These all seem to indicate that it is indeed the case that the internal order of complex beginnings is discourse-driven. This also means that the type of complex beginning that is selected is discourse-driven since reversal of the internal order in most cases yields a different type of orientation. In this section the incidental observations above will be illustrated statistically, by analyzing the contexts of larger numbers of complex beginnings. Furthermore, a possible explanation will be provided for the observation made in Section 5.2, namely that grounded orientations occur more often at the beginning of paragraphs while stepwise and complex orientations on the other hand are relatively frequently placed at the end of paragraphs.

Since it is not possible to analyze the context of all 496 complex beginnings, 15 stepwise orientations, 15 grounded orientations and 15
complex orientations were randomly selected, and their internal order was analyzed in relation to their contexts. The results are in Table 5.3. The first two columns present the examples that follow Virtanen’s two ordering principles. The third column presents the examples that either defied Virtanen’s order (i.e. adverbials that functioned in a TSC were preceded by adverbials that did not function in a TSC) or those which were not governed by her principles (i.e. because both adverbials in the complex beginning at hand functioned in the same TSC). With 67% of the examples following Virtanen’s order (n=28+2) and 33% (n=15) either defying the TSC ordering principle or not being covered by it, this principle seems more accurate than syntactic realization, semantic function or layer modification were shown to be (which all scored 55% or less). However it still is not watertight, especially not when the results of the stepwise orientations are considered. For this type of orientation, 67% of the examples (n=10) defy the TSC ordering principle and only 33% (n=5) follow it.

<table>
<thead>
<tr>
<th></th>
<th>adverbial in TSC (global or local) ^ other adverbial</th>
<th>adverbial in local TSC ^ adverbial in global TSC</th>
<th>other combinations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>stepwise</strong></td>
<td>5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>grounded</strong></td>
<td>12</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>complex</strong></td>
<td>11</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 5.3: Internal order of 45 randomly selected complex beginnings

Closer examination of the set of examples in the third column possibly reveals three other mechanisms that influence the internal order of complex beginnings. Consider as an illustration of the first mechanism the example in (17) below. This passage is from an essay in the News subcorpus pleading for a more liberal treatment of young offenders:
Juliette Lyons is a psychologist working for the Trust for the Study of Adolescence. Lately she has been organising training schemes for prison officers in an attempt to turn young offenders' institutions into places dedicated to 'active reform'. It is here that persistent offenders end up and, with a reoffending rate of about 90 per cent, active reform is an uphill task.

It involves, Ms Lyons says, 'unpicking the construction of their masculinity, getting them to re-evaluate themselves and their futures, to stop, think and try to make realistic plans for the future'. For most of them an ideal life includes a home, a job, a wife and kids. Sadly, for many of them that is in itself an unrealistic target.

The small group of under-14s who make the headlines are very likely to graduate into this group if they do not receive appropriate intervention early on. Some, such as those convicted of rape and serious violence, may be deeply damaged already and need long-term psychiatric intervention. Others are more open to influence, both good and bad, and, with determined intervention, in a community setting, they should be enabled to find more constructive ways of passing the time and demonstrating their masculinity. [NEC 162-368]

In the complex beginning in this passage (Sadly, for many of them) the second adverbial for many of them supports and continues a TSC that was initiated by For most of them in the sentence preceding the complex beginning. The first adverbial Sadly does not function in a TSC, however, and the order in this complex beginning should therefore be classified as other followed by TSC, i.e. as defying the TSC-principle as formulated by Virtanen. However, in this text Sadly is not just any type of other adverbial. It appears in a passage of the text that conveys a personally-involved plea for an issue that potentially raises quite a few emotions among other participants in this debate. Sadly could therefore be analyzed as participating in a major communicative goal of this passage and on that basis it could be in competition for absolute initial position with TSC-adverbials (see e.g. Berry 1995 and 1996 again).

Now consider the second mechanism that may influence the order in complex beginnings in general but that seems most influential in stepwise orientations. Virtanen restricts her explanation for ordering principles to coherence and cohesion resulting from a TSC, i.e. from elements in
sentence-initial position. This is a kind of coherence that, for instance, Vande Kopple (1986:82) refers to as *topic linking*. Earlier, in Chapter 4, however, Vande Kopple’s other cohesion provider was discussed already, namely *chaining*. The examples in (18) provide illustrations of how this linking by means of chains may have influenced the order in some stepwise orientations (the concept that the orientation links to is underlined).

(18) a As de Bono prepares to leave for lunch, I ask him what he is working on now. 'Oh, lots of things,' he says. 'Developing software for thinking computers. And a new language of thinking, because we are trapped in words, with all their baggage. And there is work on what I call 'the anatomy of interest' - why is something more interesting than something else?' Why indeed? But my mind is still on the original problem of interviewing a lateral thinker. 'Is there a way,' I ask him, genuinely interested, 'to apply water logic to interviews?' 'Yes, very much. One can see how things flow, what leads to what, and come up with some fascinating stories. For instance, historically the story of how I got into the whole field of education --' he says, going into it. 'I think,' he continues, 'that the interviewer should be like an impresario, bringing out what is interesting about the subject. For instance, if you asked me what was the biggest problem in modern thinking, I would say, complacency --' [NEC 64-208]

b Many people dream of changing careers - but few have the courage or commitment to make the break. The fear of not keeping up the mortgage repayments, or simply the dread of change, is enough to persuade many would-be students that they should stay where they are. However, as the *jobs-for-life ethos* disappears, more people are forced to retrain to stay in work. For some it is a major change in life - like redundancy or divorce - that causes them to look at their careers afresh. Returning to the classroom is a difficult step and few people in their middle years feel truly confident about those rusty learning skills. But for those who take the plunge, the rewards can be rich, both personally and professionally. But retraining can be costly, so it is important to
weigh up the outlay against potential earnings. Here we talk to three people who changed careers successfully. [NEC 133-343]

In both examples in (18) the initial adverbial in the complex beginning picks up the Rheme in the preceding sentence. In (18a) the Rheme talks of some fascinating stories and the complex beginning then gives an example (for instance) of one of those stories. In (18b) the Rheme talks of people who should stay where they are and the complex beginning then continues with how, in this new situation, that is not possible anymore. The contrast is introduced by However. Not surprisingly, quite a few of the stepwise orientations that are not governed by Virtanen’s TSC ordering principle are of the kind exemplified in (18). Since stepwise orientations often start with a rhetorical adverbial – a type of adverbial that can easily realize a local link – it makes sense that these orientations are used in situations that link the orientation of the next sentence to the predicate of the preceding clause. In many cases this type of link does not encompass more than one discourse act, which further emphasizes its local nature. It is however not the case that chaining links are restricted to stepwise orientations; complex and grounded orientations can also be governed by this principle, as the examples in (19) prove.

(19)a  Logically the problem of individual identity is closely related to the epistemological status of proper names; for, in the words of Hobbes, ‘Proper names bring to mind one thing only; universals recall any one of many’. Proper names have exactly the same function in social life: they are the verbal expression of the particular identity of each individual person. In literature, however, this function of proper names was first fully established in the novel. [NEC 9-73]

b  We were waiting at Athens Airport, yesterday,' Carol Shields is saying, 'and there they were, these two young people all over each other. ---

The young English couple (he was wearing a blazer) did not notice the tiny, bird-like lady perched on a chair nearby, her head in a newspaper; that they were being observed by Carol Shields, the Canadian novelist whose books chronicling the yearnings of the human heart have brought her such recent acclaim in Britain.
This year, after two near-misses in 1991 and 1992, she has made it to the Booker shortlist and is tipped to carry off the prize tonight. [NEC 72-221]

A third and final mechanism is illustrated by the example that was earlier presented in (16) and that is now repeated below as example (20). As was pointed before, in this passage the local TSC adverbial (after a single day) follows rather than precedes the global TSC adverbial (if the process goes on as slowly as one generation per hour).

(20) There is no higher point to a program that says ‘Duplicate Me’. But if an effective 'Duplicate Me' program happens to come into existence, for whatever reason, it will be duplicated and then there will be two of them. Each of the two, being an exact copy of the original, obviously also says ‘Duplicate Me’. When these two are obeyed, there will be four. If the process goes on as slowly as one generation per hour, after a single day the number of duplicates will be 100 million; after three days the number will be so large that, tiny as viruses are, if they were laid end to end they would stretch to the Moon and back 100 million times. [NEC 30-144]

In this passage it makes sense, however, that the global adverbial precedes the local one. At the moment the local adverbial is introduced the reader is not aware of any local strategy yet. Only in hindsight does it become the initiator of a new local TSC. To put it in Virtanen's terms, at the moment the local adverbial is introduced the local TSC is not yet 'given'. A similar principle was also encountered in the analysis of the passage in (11) in Section 5.5. These two examples together raise the hypothesis that supporters of established TSCs precede initiators of new TSCs, be they local or not. However, that is not all there is to it. Consider also the example in (21):

(21) If themselves products of the sexual revolution of the Sixties, they are faced with having to tell pupils ‘to do as I say, not as I do (or did)’. Many only do it because they feel they are their pupils’ last resort. So it is not hard to imagine two teachers of sex education in adjoining classrooms, each giving a different answer
to the questions the pupils are asking, both able to claim they are complying with the guidelines. **On the one side, for instance**, ‘responsibility’ in sex education seems to mean promoting the use of condoms to prevent Aids or pregnancy. **On the other side** it is about confining the outlets of sexuality within the safety barrier of marriage. Of all words, the one completely absent from Mr Patten’s latest circular is ‘chastity’. [NEC 39-165]

In the complex beginning in this passage the adverbial that initiates a new local TSC (on the one side) precedes the one that functions in a global TSC (for instance), just as Virtanen predicted. The semantics of this particular initiator are such that a reader immediately grasps that it is to start a new TSC. Openings such as on the one side, on the one hand, initially, or at first beg follow-ups such as on the other side, on the other hand, then, or later. We earlier saw an example of initially and then in the passage in (14) in this chapter.

The discussions above yield the following, expanded, set of ordering rules, for which, at this point, no hierarchical order has been established:

(22) a supporter major communicative goal ^ other adverbial
   b supporter TSC ^ other adverbial (‘other adverbial’ could turn out to be initiator new local TSC)
   c local TSC ^ global TSC (local TSC need to be established before or semantics of first-initial adverbial need to suggest initiation of new local TSC)
   d adverbial that provides chaining link ^ other adverbial

When the 45 complex beginnings in the random sample are classified according to this set of ordering rules only three complex beginnings still need to be classified as other combinations (see Table 5.4). All other combinations fall into one of the four categories, with the original principle as formulated by Virtanen, rule (b), still explaining by far the majority of the examples.
Interestingly enough, grounded and complex orientations are mainly governed by rule (b) (supporter TSC ^ other adverbial). As was pointed out in the analyses of examples throughout this chapter, this seems to be the result of the grounding function of the second adverbial: the first adverbial fits the entire sentence or passage in the contexts by supporting the TSC; the second adverbial then provides relevance to the period of time, the place, or the participant that the first adverbial refers to as an orientation.

Finally, remember that in 5.2 it was established that stepwise and complex orientations occurred more than expected in paragraph-final positions, whereas grounded orientations occurred more than expected in paragraph-initial positions. For stepwise and complex orientations, the explanation is at hand. These types of complex beginning often include a rhetorical adverbial. As was pointed out before, this type of adverbial is exceptionally good at forming local links and links that connect one clause to another – as does the link that relates the final sentence of a paragraph to the preceding text in that paragraph – are obviously more local than links that connect one paragraph to another. Stepwise and complex orientations are therefore likely to occur in paragraph-final sentences. Grounded orientations, on the other hand, often consist of a representational adverbial followed by an adverbial that relates this representational element to a relevant development or event. As was shown repeatedly in the examples discussed above, such moves are generally made in texts that are structured according to a global temporal chain, such as biographies. Paragraphs in such texts deal with sets of related events and such events are then introduced by a new temporal orientation. Often these new time frames need grounding and the second
satellite in a grounded orientation can perform exactly that function. Throughout Chapters 4 and 5 several examples have illustrated this point already. The passage in (23) comes from the random sample of complex beginnings and provides yet one more:

(23) Arthur George Weidenfeld was born a Viennese Jew in 1919. The only son of Rosa and Max, an insurance agent and would-be don, he was studying at Vienna's diplomatic college when it became expedient to leave the country. That was in 1938, after the Anschluss. He arrived in London ----- Within a year of his arrival in London, Weidenfeld was rubbing shoulders with such characters as Princess Marie-Louise, --- In the summer of 1939, Weidenfeld found work in the BBC Monitoring Service, and as a news commentator for the BBC Empire and North American Service. For eight months between 1943 and 1944, he had a column called 'Subject Europe' in the News Chronicle. ---; in 1943 he co-authored a book about it, The Goebbels Experiment. ----. His first enterprise, in 1944, was a highbrow magazine called Contact, and one of his first employees an art critic called Ben Nicolson. ---- About this time he began sharing a house with the writer and historian Peter Quennell. ----- In the late 1940s, Weidenfeld was taken up by the wealthy and influential Flora Solomon, whose other proteges included Richard Crossman, ---- In 1952 Weidenfeld married Jane Sieff, niece of one of the founders of Marks & Spencer. Some time after his marriage, ----. Weidenfeld is said not to have noticed when, in 1954, his wife and child left the breakfast table, never to return. ----. The early Seventies marked the peak of Weidenfeld's success. The jewel in his crown was his elevation to the peerage -- In the Eighties, under Thatcher Weidenfeld's personal influence waned. The embassy invitations and summonses to Downing Street tailed off. His political sympathies had always been with the left (or left-ish - in 1981 he joined the SDP). ---. In 1983 Weidenfeld committed what was then a staggering dollars 1.5 million to Mick Jagger's memoirs ---
As early as 1984 Weidenfeld was rumoured to be wanting out. ---
In 1985 he formed his own mini-conglomerate with the
millionairress ---
His moment came in 1991, when the waning star of Weidenfeld &
Nicolson was added to the new constellation of the Orion Group.
---- [NEC 220-481]

Finally, as a bonus, consider the example in (24). All complex beginnings
discussed so far participated in a temporal, spatial or rhetorical TSC. The
complex beginning in this passage shows that they can also function in
participant TSCs:

(24) A newspaper is a two-stroke profits engine. It makes money
selling to readers by charging them a cover price and sells space
in its pages to advertisers who want to sell something else to the
readers. But The Times' move to cut a third off its cover price this
week will cost its publisher, News International, almost half its
revenue from sales, thanks to the decision to maintain payments
to distributors. It can bear the pain of bigger losses, but while
others, including The Daily Telegraph, refused to follow suit, they
will also hurt.
In the past few years, the papers' very aggressive cover price
policies have offset weak advertising revenue. [Among the daily
broadsheets, for example] prices have been raised by more than
50p in real terms in the past five years. [NEC 66-210]

5.9 The structure of the sentence-initial area
Remember that FG’s description of the sentence-initial area revolves
around the distinction between intra-clausal and extra-clausal elements
and their different functionality. Typically, the basic functional pattern
established for an English declarative sentence is as in (25):

(25) P2, P1 S V/V, O X, P3

When this structure was discussed in Chapter 2, two problems were
pointed out. In the first place it is not always possible to distinguish
clearly between P2 and P1 elements (see Hannay’s analysis of the On the
St. Petersburg waterfront sentence in Chapter 2). In the second place, it is
not clear whether this functional structure permits a complex orientation (such as *In Britain, however*) to be analyzed as being part of one and the same functional unit. However, given the analysis of complex orientations in Chapter 4 and 5, this is clearly desirable.

As a result of the discussions in Chapters 4 and 5 two more issues can be added. In the first place, the validity of the distinction between P1 and P2 can be questioned. Many representational satellites, conventionally considered to be part of the clause, were shown to carry discourse organizational functions similar to functions that elements in P2 are normally considered to carry. In the second place, all relations that have been identified between the adverbials in a complex beginning can also be identified between other sentence elements. Consider for instance the example provided by Hartnett (1995:201) in (10) earlier in this chapter which presents a Subject followed by a rhetorical satellite in a combination that is remarkably similar to a complex orientation. A further illustration of a non-adverbial complex orientation is provided by the passage in (26), reported in Hannay (2001):

(26) The earliest Scots to arrive in Cologne were apparently drawn by its faculties of law: Nicholas Atholl and James Scringeour were already graduates when they matriculated at Cologne in 1419. Scrimgeour, certainly, was a former student at Paris but Atholl’s first university, from which he held the degree of B.Dec. as early as 1409, is unknown.

Consider also the example in (27) below, from data collected by Duurkoop (2001). In this passage the combination between the Subject *Jennifer Aniston* and the non-restrictive relative clause *who also knows what it’s like to be attacked by the Too Fat/Too Thin police* is similar to that of a grounded orientation. Despite the fact that Jennifer Aniston, being a well-known actor, is not unfamiliar to many readers, her relevance in the current text only becomes clear with extra information provided by the relative clause. Furthermore, the combination between the rhetorical adverbial *in fact* and the Subject *Jennifer Aniston* is also familiar: it echoes the structure of a stepwise orientation.

(27) Kate’s two-fingered salute to body fascists everywhere is truly inspiring. In fact, Jennifer Aniston (*who also knows what it’s like*
to be attacked by the Too Fat/Too Thin police) told me she had a picture of Kate stuck to her fridge. When I asked her why, she said simply: “She is one of the good ones”.

In conclusion, the structure of the sentence opening does not necessarily need to distinguish between P1 and P2, but it does need more than one functional slot for orientations that do not enter into a relationship with each other (as is the case in stepwise and compound orientations), while it also needs to distinguish between orientations that function independently and those that relate to previous orientations (as is the case in grounded, complex and composite orientations). Furthermore, as is shown by the examples in (26) and (27), it is not enough to define such sentence slots for the pre-subject area of the declarative sentence. Since the subject can be grounded by elements in the post-subject slot much in the same way as first-initial adverbials can be grounded by second-initial adverbials, it is also necessary to define a post-subject modifying slot. This automatically entails an extended interpretation of the orientational field: sentence-initial position does not end with the elements that are in pre-subject position; rather it also includes the Subject and all elements in post-subject position that modify the subject (Hartnett 1995 calls this position ‘the pit’; see also Altenberg 1998, Gomez-Gonzalez 1998). In an attempt to meet all these demands, Hannay (2001) - seeing things not in terms of the extended clause, but in terms of the text sentences - suggests the following functional pattern for the orientational field:

(28) \[O_1\text{-M}] - \[O_2\text{-M}] - \[O_3\text{-M}] - \[S\text{-M}\]

In this structure \(O_x\) stands for orientation while \(M\) stands for different kinds of modification to this orientation. Note that when an \(O_x\)-slot is filled, the accompanying \(M\)-slot can remain empty. Note also that in this structure as yet the number of orientations is limited to a maximum of 3. This maximum is based on the fact that the analysis of neither the Native English Corpus (NEC) nor the Learner English Corpus (LEC) yielded acceptable complex beginnings that included more than 3 orientations.

Consider the examples in (29) as illustrations of how the different complex beginnings may fit into this structure. The sentences in (29a) and (29b) represent a stepwise and a compound orientation, respectively.
The discourse functions of complex beginnings

The sentences in (29c)-(29e) represent a grounded, a complex and a composite orientation.

(29) a However, around this time, the RMZ, a government agency, embarked upon a scheme to….
   [O1] [O2] [S – M]

b Stripped of his Army rank, hair falling over his collar, Anthony Dryland presents an unlikely figure of retribution.
   [O1] [O2] [S]

c Later, with England converted to Christianity, the daughters of the great Anglo-Saxon noblemen were sent abroad to France to be educated.
   [O1 - M] [S]

d By the early 1970s, however, this attitude was changing.
   [O1 - M] [S]

e At a conference in London today, Mr Whiskin will stand up and ask his audience to change their minds too.
   [O1 - M] [S]

The examples in (30) show that complex beginnings consisting of three adverbials easily fit in this structure as well:

(30) a If things fall apart, from whatever background you are, whatever your condition, this is where you come to
   [O1] [O2] [O3] [S]

b Now, however, with typical boldness, he has put his head above the parapet once more
   [O1 - M] [O2] [S]

While this structure seems adequate in its description of the orientational area of the sentence, one problem remains. In its current state it assigns a similar functionality to the second adverbial in a grounded orientation (i.e. with England converted to Christianity in [29c]) and to the second
adverbial in a complex orientation (i.e. *however* in [29d] and [30b]): both are in a modifying field. However, to the extent that the analyses in Chapters 4 and 5 are correct, they suggest that while both second adverbials enter into a relationship with their first adverbials and while they both provide the reader with instructions on how to interpret these first adverbials, their actual functionality still differs in the way they relate to their main clauses: the second adverbial in a complex orientation is considered to form a unit with the first adverbial, while the second adverbial in a grounded orientation is considered to provide an independent orientation to the main clause. The template suggested above does not allow for such an independent orientation. Possibly, however, this relation does not need to be represented in the functional structure of the clause but can remain the responsibility of the individual elements. Support for this comes from the fact that second adverbials in complex orientations are, with regard to syntactic realization and layer modification, distinct from second adverbials in grounded orientations.

### 5.10 Summary

Analyses in this chapter have shown that complex beginnings often occur at boundaries of major text units, that they represent properties of the text genre they are used in, and, most importantly, that when used well, they help organize the discourse: the specific order in a complex beginning, and therefore the type of complex beginning that is produced, can facilitate understanding of a sentence and support the coherent development of a text. Despite their important role in the organization of the discourse and in the orientation on the subsequent main clause, however, complex beginnings are not adequately accounted for in functional descriptions of sentence-initial structures. While this chapter did not propose a full-fledged analysis, it did formulate suggestions that might be considered when developing a mechanism in FG for dealing with the orientational area of the text sentence.

### Notes

1. The results in Table 5.1a also defy the idea that minor text units are generally not introduced by combinations of orientations: 126 last sentences (i.e. by
The discourse functions of complex beginnings

definition minor text units, because the orientations cannot scope over more than one sentence) were fit in their context with the help of a cluster of orientational adverbials. That is about as many as would be expected for a random distribution.

2 When a paragraph consisted of just one sentence, this sentence was classified as paragraph-initial.


4 Notice that in Virtanen’s definition **topic continuity** refers to a chain of inanimate or non-human entities (in contrast to participant continuity, which refers to a chain of animate entities). This is a restricted interpretation of Givón’s notion of **topic continuity** which includes both animate and inanimate entities (1983a).

5 Both participant and topic TSCs are likely to be sustained by arguments (subject and objects). Action TSCs are likely to be sustained by initial verb forms (e.g. imperative mood).

6 Notice that Virtanen’s line of argumentation is potentially circular: on the one hand Virtanen holds that the text is structured according to a temporal TSC, because temporal TSCs are placed sentence-initially; on the other hand she hypothesizes that the temporal adverbials precede the spatial adverbials, because the text is structured according to a temporal TSC.
6

Complex beginnings in Dutch Learner English

6.1 Introduction
Chapter 1 formulated the three perspectives from which this study examines complex beginnings. Having addressed the form and function of complex beginnings – the first perspective – in Chapters 2-5, this chapter will continue with the second of these perspectives, namely complex beginnings and second language acquisition. The two questions that Chapter 1 raised in this respect were (1) ‘Do Dutch learners of English (undergraduate students) produce the same types of complex beginnings, and in the same quantity, as native speakers do?’ and (2) ‘If they do not, can observed differences between complex beginnings produced by native speakers and by Dutch learners be attributed to language competence, to general discourse competence and/or to language-specific discourse competence?’ This chapter will deal with the first of these questions by comparing the complex beginnings encountered in a learner corpus with the complex beginnings encountered in the native corpus. Section 6.2 will describe the corpus from which the learner complex beginnings were collected. Sections 6.3-6.8 will compare the frequency and formal properties of these learner complex beginnings with the frequency and properties of the native complex beginnings. Section 6.9 will subsequently formulate hypotheses for the observed differences.

6.2 The Learner English Corpus (LEC)
The Learner English Corpus (henceforth LEC) was especially compiled for this study and contains 484,810 words (22,543 sentences) (see Table 6.1). It consists of English texts produced by Dutch students of English, which are subcategorized according to 3 levels: first year texts, second year texts, and third and fourth year texts. The first and second year corpora contain argumentative essays on a variety of topics such as environmental protection, petty crime, euthanasia, alternative life styles,
etc., while the third and fourth year texts are essays and chapters of theses on literary and linguistic topics. The majority of the first and second year texts were produced between 1991 and 1995 by native speakers of Dutch who study English at the Free University in Amsterdam. The other first and second year texts and all third and fourth year texts were produced between 1994 and 1997 by students at the University of Amsterdam. About half of the second year essays were electronically available, while all other texts were only available in hard copy (hand-written, typed or printed). None of the texts were tagged.

In order to ensure a coherent corpus, the collection of texts was subjected to the norms used for the International Corpus of Learner English (ICLE), a corpus of English produced by speakers with several mother tongue backgrounds (about 200,000 words per mother tongue) (Granger 1998b). These norms are set out in Table 6.2 (Granger 1998b:8ff; see also Atkins and Clear 1992:5):

<table>
<thead>
<tr>
<th></th>
<th>texts</th>
<th>sentences</th>
<th>words</th>
<th>words/sent.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>first year</strong></td>
<td>122</td>
<td>6,180</td>
<td>126,920</td>
<td>20.5</td>
</tr>
<tr>
<td><strong>second year</strong></td>
<td>242</td>
<td>13,756</td>
<td>297,498</td>
<td>21.6</td>
</tr>
<tr>
<td><strong>third and fourth year</strong></td>
<td>13</td>
<td>2,598</td>
<td>60,392</td>
<td>23.2</td>
</tr>
</tbody>
</table>

**Total** | 377 | 22,543 | 484,810 | 21.5 |

Table 6.1: the Learner English Corpus (LEC)

The LEC follows ICLE’s definitions in almost every respect, but with regard to the feature *level* there are nevertheless some differences. Like the ICLE, the LEC defines ‘advanced level’ as university or tertiary level, but unlike the ICLE, this is not further specified as “texts produced by third year students” (Granger 1998b:8). As was mentioned before, the LEC includes texts produced by first year students, by second year students and by third and fourth year students. This allows for a semi-longitudinal study. Why such a study may be interesting will be explained below. First notice that the decision to include more than one advanced level also has consequences for the parameters *technicality* and *practical experience*. The third and fourth year essays are more technical.
than the first and second year essays, since they generally deal with more technical topics. Furthermore, third and fourth year students may have more practical experience, since they are more likely to have spent an extended period of time in English-speaking countries. This means that the texts in this subcorpus may constitute a slightly different text type than the first and second year texts and results of comparisons should therefore be interpreted with caution.

<table>
<thead>
<tr>
<th>Shared features in ICLE subcorpora</th>
<th>LEC</th>
<th>Variable features in ICLE and LEC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>learner</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age: ±20</td>
<td></td>
<td>Sex</td>
</tr>
<tr>
<td>Learning context: EFL</td>
<td></td>
<td>Other foreign languages</td>
</tr>
<tr>
<td>Level: advanced</td>
<td>Mother tongue: Dutch</td>
<td>Practical experience</td>
</tr>
<tr>
<td>Region: The Netherlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level: 1st year, 2nd year, 3rd and 4th year</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>text</strong></td>
<td>Task setting: take-home exam</td>
<td>Topic</td>
</tr>
<tr>
<td>Medium: written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genre: arg. essay</td>
<td>Technicality: range from non-technical to more technical</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2: ICLE Design criteria

Despite the risk that inclusion of 3rd and 4th year texts affects the coherence of the LEC negatively, it was nevertheless necessary to compile a corpus that reflects an increasing discourse competence and writing experience. The reason for this is that Chapter 1 hypothesized that both properties may have an impact on the type and quality of the complex beginnings that are produced.

One last point should be noted. As was mentioned earlier, the Native English Corpus (NEC), which was used as a source in Chapters 3-5, will function as a control corpus for the LEC. It should be understood beforehand, however, that this choice is not entirely unproblematic. The LEC mainly consists of essays while the bulk of the texts in the NEC are newspaper articles. It is, however, notoriously hard to find native text types that unambiguously compare to student essays. Student essays “appear to constitute a hybrid form of writing which combines salient features of a number of text genres” (Grabe and Kaplan 1996:49) and as a
result they almost comprise an entire text type of their own. This, of course, implies that an adequate control corpus – or, more carefully put, ‘a least unsuitable control corpus’ (Ringbom 1999:191) – for non-native student essays is a corpus that consists of native student essays, such as the LOCNESS corpus collected by the University of Louvain (see also Granger and Tyson 1996, who arrived at a similar conclusion when investigating French learners’ use of connectors). However, for the study of complex beginnings, LOCNESS brings a major drawback: since it is hypothesized that the production of complex beginnings may be related to language competence and discourse competence, it is necessary to compare the learner complex beginnings to complex beginnings that may be considered target-like with respect to each of these factors. The material to which the learner complex beginnings are compared should therefore be produced by language users who are not only native speakers (as English students are) but also language users who have achieved a professional level of discourse competence, i.e. expert writers (as English students are not). Unlike the writers of the LOCNESS texts, the subjects who produced the texts in the NEC meet both requirements.

Nevertheless, the discrepancies between the NEC and the LEC should not be ignored, and this study will attempt to compensate for them in two ways. In the first place, the NEC is designed in such a way that it matches the LEC to an adequate extent. For instance, according to Granger (1998b:18), there are indications that student essays may be compared to newspaper editorials. As a result, the newspaper corpus includes a fair number of these. It further includes political essays and other types of newspaper articles such as background stories and human interest articles which deal with topics that are similar to the topics in the first and second year student essays. This gives a good chance of encountering as many arguments (i.e. ‘the educational system should/should not be changed, because…’) and as much personal involvement (i.e. ‘I think/do not think that DNA-technology is …, because personally I believe you should/should not meddle with nature’s course’) in the NEC as in the LEC. Furthermore, the NEC includes academic texts on linguistic and literary issues to match the third and fourth year texts. Finally, in the comparisons between the NEC and the LEC the complex beginnings from the Fiction subcorpus were ignored, since the LEC does not contain texts that may provide a match for fiction.

In the second place, this study makes use of other data than just those resulting from the corpus analysis. Chapters 8 and 9 will report on
an experiment designed to reveal construction processes of various types of complex beginnings in various contexts. These tasks were carried out by native speakers and non-native speakers, expert writers and novice writers. As a result they provide information from four different types of subjects on the same complex beginnings. To the extent that such elicitations can be considered adequate representations of spontaneous writing situations, the results can be used to judge the validity of the corpus comparisons carried out in this chapter.

### 6.3 Frequency of complex beginnings in Dutch Learner English

The LEC yielded 682 complex beginnings (Table 6.3) in total. The vast majority, 96% (n=661), consist of two adverbials. The rest, 4% (n=21), consist of three or more adverbials. (Again, in the statistical comparisons only complex beginnings consisting of two adverbials will be taken into account). An Anova test comparing the frequency of complex beginnings in the texts of the different year groups indicates that second year learners of English produce most complex beginnings ($p=.031$; Tukey HSD yields $p=0.024$ for a comparison between first and second year texts). However, this result should be interpreted with caution: in all groups the standard deviation is high while the effect size is small ($f=.056$). Apparently, the internal variation in each group is substantial.

<table>
<thead>
<tr>
<th>Complex beginnings</th>
<th>2 adv.</th>
<th>&gt;2 adv.</th>
<th>Total</th>
<th>per 100 sent. (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>148</td>
<td>3</td>
<td>151</td>
<td>2.4 (2.83)</td>
</tr>
<tr>
<td>2nd year</td>
<td>447</td>
<td>10</td>
<td>457</td>
<td>3.4 (3.04)</td>
</tr>
<tr>
<td>3rd and 4th year</td>
<td>66</td>
<td>8</td>
<td>74</td>
<td>2.7 (2.47)</td>
</tr>
<tr>
<td>Total</td>
<td>661</td>
<td>21</td>
<td>682</td>
<td>3.0 (2.98)</td>
</tr>
</tbody>
</table>

Table 6.3: Complex beginnings in the LEC
When the frequency in the three subcorpora in the LEC is compared to their counterparts in the NEC, we find that both first and second year students produce more complex beginnings per 100 sentences than native English speakers do (Table 6.4). Again, however, the standard deviations for each comparison are relatively high, while the effect sizes are low.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>per 100 sent.</th>
<th>Std. Dev.</th>
<th>Significance (t-test)</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>News (NEC)</strong></td>
<td>378</td>
<td>1.82</td>
<td>1.80</td>
<td>p=.027</td>
<td>$\omega^2 = .01$</td>
</tr>
<tr>
<td><strong>First year (LEC)</strong></td>
<td>148</td>
<td>2.46</td>
<td>2.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>News (NEC)</strong></td>
<td>378</td>
<td>1.82</td>
<td>1.80</td>
<td>p&lt;.001</td>
<td>$\omega^2 = .08$</td>
</tr>
<tr>
<td><strong>Second year (LEC)</strong></td>
<td>447</td>
<td>3.31</td>
<td>3.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic (NEC)</strong></td>
<td>73</td>
<td>3.39</td>
<td>2.65</td>
<td>p=.540</td>
<td>$\omega^2 = .03$</td>
</tr>
<tr>
<td><strong>Third and fourth year (LEC)</strong></td>
<td>66</td>
<td>2.70</td>
<td>2.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.4: NEC subcorpora compared to LEC subcorpora

Because of the high standard deviations in the previous two tests, it is probably more insightful to look at the distribution of the scores, rather than at a straight comparison of means. To this end, all scores per subject were categorized in quartiles. That is, the lowest 25% of all scores (229 native texts and 377 non-native texts; 606 texts in total) are grouped in the first quartile, the second 25% of the scores are grouped in the second quartile, etc. Table 6.5 shows the resulting ranges for each quartile: the first quartile contains all scores of 0 complex beginnings per 100 sentences; the second quartile contains those scores that range from .37 to 1.82 complex beginnings per 100 sentences, etc.
Graph 6.6 shows how the first year scores, second year scores, and native newspaper scores are distributed over each quartile (scholarly and third and fourth year scores are in Graph 6.7) and this yields two interesting observations. In the first place, first year learners are overrepresented in the first quartile: 39% of all first year learners (against 25% and 23% for native speakers and second year learners) produced no complex beginnings at all. This observation is especially interesting since Table 6.4 showed that first year learners produce more complex beginnings than native speakers do. The first year learners in the other quartiles must have scored on the high end of each range, therefore, in order to compensate for the high number of zero-scores in the first quartile. For the second observation, consider how the three groups are represented across the four quartiles. While about 25% of the native speakers produce no complex beginnings at all, most (38%) produce between .37 and 1.82 complex beginnings per 100 sentences and are therefore categorized in the second quartile. From the second quartile onwards, however, the percentage of native speakers per quartile decreases. This results in a unimodal, more or less symmetric distribution with a slightly prolonged tail. For non-native speakers a different pattern emerges. While both first and second year texts are underrepresented in the second quartile, the percentage of non-native texts from this second quartile onwards increases, resulting in a bi-modal distribution with its peaks at both ends: higher in the first quartile, lowest in the second and increasing from that point onwards.

<table>
<thead>
<tr>
<th>Complex beginnings per 100 sentences</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>lowest score per quartile</td>
<td>0</td>
<td>.37</td>
<td>1.92</td>
<td>3.85</td>
<td>0</td>
</tr>
<tr>
<td>highest score per quartile</td>
<td>0</td>
<td>1.82</td>
<td>3.82</td>
<td>14.29</td>
<td>14.29</td>
</tr>
<tr>
<td>N per quartile</td>
<td>158</td>
<td>146</td>
<td>150</td>
<td>152</td>
<td>606</td>
</tr>
</tbody>
</table>

Table 6.5: Ranges and frequencies per quartile
When the frequency distribution of complex beginnings in the third and fourth year texts is compared to the frequency distribution of complex beginnings in academic native English, a similar picture emerges (see Graph 6.7). Firstly, as was the case with the newspaper texts, the academic texts show a more or less normal distribution, be it that the top is in the third quartile rather than in the second. This confirms the observation in Chapter 3 that academic texts – which are more technical – contain more complex beginnings in general than newspaper and fiction texts do. Secondly, as was the case with first and second year essays, the third and fourth year texts exhibit a wave-like pattern. However, the ‘onset’ of their wave is in the second quartile rather than in the first. This indicates a higher frequency of complex beginnings in more technical texts. An interpretation that may explain the bi-modal learner pattern in both graphs is that some learners are shy to use complex beginnings, but that they tend to overuse them when they have discovered the possibility of the constructions (especially when the learners are less advanced).
6.4 Types of orientations in Dutch Learner English

Based on the complex beginnings collected from the NEC, Chapter 4 distinguished five types of complex beginnings, namely stepwise orientations, compound orientations, grounded orientations, complex orientations and composite orientations, all exemplified again in (1) for easy reference.

(1) a  Stepwise orientation: However, in Britain things are different.
    b  Compound orientation: Facing away from Europe, always rather depending on their own resources, the British do these things differently.
    c  Grounded orientation: Over the past few years, under Blair, things have changed radically.
    d  Complex orientation: In Britain, however, things are different.
    e  Composite orientation: In Britain today things are different.

Graph 6.8 shows the frequencies of these different types of complex beginnings in the three subcorpora of the LEC:
The first thing to be noticed in this graph is that the learner repertoire of complex beginnings is rather limited. In the case of first and second year learners almost three quarters of all complex beginnings are stepwise orientations. No compound orientations were produced and in the entire LEC only two composite orientations were encountered (one in the first year texts and one in the second year texts). Notice, by the way, that third and fourth year students produce not only fewer stepwise orientations but also more complex orientations than first and second year students ($\chi^2[4]=9.92, p=.042$ and $C=.12$).

A comparison of the frequency of the three major orientations (stepwise, complex and grounded) in the three groups in the LEC with the frequency of these orientations in the respective control corpora in the NEC shows that first and second year texts contain more stepwise orientations and fewer grounded orientations than the newspaper texts do (see Table 6.9a and 6.9b). No such differences could be observed for third and fourth year texts (see Table 6.9c). Interestingly, Tables 6.9a and 6.9b suggest a further difference, which the chi-square test cannot bring out due to the high number of stepwise orientations. Consider the relation between stepwise and complex orientations. The News subcorpus in the NEC contains a bit more than twice as many stepwise orientations ($n=147$) as complex orientations ($n=66$). The first and second year corpora in the LEC, on the other hand, contain more than four times as
many stepwise orientations as complex orientations (109 stepwise versus 24 complex and 332 stepwise versus 73 complex, respectively). This may indicate an underuse of complex orientations by first and second year learners. This observation is especially interesting since Chapter 5 showed that stepwise orientations and complex orientations potentially form a minimal pair. That is, reversal of the satellites in a stepwise orientation that consists of a rhetorical or propositional adverbial followed by a representational one may result in a complex orientation. If learners, when faced with a choice between producing a stepwise and a complex orientation, consistently choose to produce a stepwise orientation, this leads to a hypothesis that stepwise orientations are somehow easier to produce than complex orientations. It also may be that learners do not know about the possibility of complex orientations yet. Finally, it may be the case that learners do not set up the textual structures that warrant a complex orientation. That is, possibly when learners structure their texts they are more concerned with the local coherence, often established with connectors, than with a global coherence established by temporal or spatial text strategic continuities (TSCs).

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>complex</th>
<th>grounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (NEC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=343)</td>
<td>43</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>First year (LEC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=147)</td>
<td>74</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>

Chi-square Test  
$\chi^2[2]=47.96, \ p<.001, \ C=.30$

Table 6.9a: News (NEC) versus First Year (LEC) (scores are in percentages)

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>complex</th>
<th>grounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (NEC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=343)</td>
<td>43</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>Second year (LEC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=443)</td>
<td>75</td>
<td>16</td>
<td>9</td>
</tr>
</tbody>
</table>

Chi-square Test  
$\chi^2[2]=111.26, \ p<.001, \ C=.35$

Table 6.9b: News (NEC) versus Second Year (LEC) (scores are in percentages)
In previous chapters it was established that each orientation carries specific characteristics with regard to syntactic, semantic and layer modification properties. Sections 6.5 through 6.8 will examine these properties for the learner complex beginnings and then compare them to their native counterparts. Composite and compound orientations are not discussed since their numbers in the LEC were too low to allow for meaningful statistical analysis.

### 6.5 Stepwise orientations in the LEC

The analysis of stepwise orientations (i.e. *However, in Britain*) collected from the NEC yielded three characteristics. Syntactically speaking, stepwise orientations often consist of an adverb phrase, followed by another type of realization. Semantically speaking they tend to consist of an adversative (i.e. *however*), a causal (i.e. *consequently*), an additional (i.e. *for example*) or an attitudinal function (i.e. *of course*) followed by some other semantic function (generally time or place). With regard to layer modification, finally, the majority of the stepwise orientations feature a higher layer (generally rhetorical) followed by a lower layer (generally predicational). Comparisons between the three subcorpora of the LEC yielded no significant results for any of the properties (with N=480, the results of the chi-square tests were: syntactic realization: $\chi^2[2]=1.01, p = .603, C=.05$; semantic function $\chi^2[8]=9.68, p = .288, C=.14$; and layer modification: $\chi^2[4]=1.73, p = .785, C=.06$). That is, the structures of first year, second year, and third and fourth year stepwise orientations do not differ from each other.
When we compare the composition of the LEC stepwise orientations to those produced in the NEC, however, there are some differences to be observed. Consider first Tables 6.10a through 6.10c, for an analysis of the syntactic realization of the stepwise orientations in the two corpora. While the English journalists, too, generally produce stepwise orientations that consist of an adverb phrase followed by another realization (n=95), still almost one third of all native stepwise orientations (n=52) are realized with another type of syntactic realization in first initial position. First and second year learners, on the other hand, overproduce the prototypical syntactic realization of stepwise orientations. In their texts first year learners produced only 19 stepwise orientations that feature a non-adverb phrase in first initial position (17%). Second year learners produced non-prototypical stepwise orientations (15%). Third and fourth year stepwise orientations are, from a syntactic point of view, practically similar to native examples. Not surprisingly (since rhetorical satellites are generally realized as adverb phrases), a comparison between the NEC and the LEC with regard to ‘layer modification’ yields a similar pattern: first year learners and second year learners produce more high-low combinations (i.e. more rhetorical-representational, interpersonal-representational or rhetorical-interpersonal combinations) than native English journalists (for both chi-square tests $p<.001$; for the first year students versus News: $N=256$, $\chi^2[2]=22.52$, and $C=.28$; for the second year students versus News: $N=479$, $\chi^2[2]=55.57$, and $C=.32$). Again, there was no significant difference between third and fourth year students and native English scholars on the other hand ($N=76$, $\chi^2[1]=1.04$, $p=.308$ and $C=.12$).

<table>
<thead>
<tr>
<th></th>
<th>adv. phrase.</th>
<th>$-X.$</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>News (NEC)</strong></td>
<td>(n=147)</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td><strong>First year (LEC)</strong></td>
<td>(n=109)</td>
<td>83</td>
<td>17</td>
</tr>
<tr>
<td><strong>Chi-square Test</strong></td>
<td>$\chi^2[1]=10.05$, $p=.002$, $C=.19$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 6.10a: Syntactic realization of stepwise orientations in News (NEC) versus First year (LEC) (scores are in percentages)*
adv. phrase – X. other

<table>
<thead>
<tr>
<th>News (NEC)</th>
<th>adv. phrase – X.</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=147)</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>Second year (LEC)</td>
<td>(n=332)</td>
<td>86</td>
</tr>
</tbody>
</table>

Chi-square Test $\chi^2[1]=30.04, \ p<.001, \ C=.24$

Table 6.10b: Syntactic realization of stepwise orientations in News (NEC) versus Second year (LEC) (scores are in percentages)

<table>
<thead>
<tr>
<th>Academic (NEC)</th>
<th>adv. phrase – X.</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=37)</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td>Third and fourth year (LEC)</td>
<td>(n=39)</td>
<td>85</td>
</tr>
</tbody>
</table>

Chi-square Test $\chi^2[1]=1.55, \ p=.213, \ C=.14$

Table 6.10c: Syntactic realization of stepwise orientations in Academic (NEC) versus Third and fourth year (LEC) (scores are in percentages)

Now consider Tables 6.11a through 6.11c for a comparison of the use of semantic functions in native and learner complex beginnings. First and second year learners tend to overproduce prototypical combinations,

<table>
<thead>
<tr>
<th></th>
<th>Adversative -X</th>
<th>Causal -X</th>
<th>Additional -X</th>
<th>Attitudinal -X</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (NEC)</td>
<td>(n=147)</td>
<td>24</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>First year (LEC)</td>
<td>(n=109)</td>
<td>31</td>
<td>13</td>
<td>25</td>
<td>9</td>
</tr>
</tbody>
</table>

Chi-square Test $\chi^2[4]=9.19, \ p=.057, \ C=.19$

Table 6.11a: Semantic functions of stepwise orientations in News (NEC) versus First year (LEC) (scores are in percentages)
i.e. those combinations that are also most frequent in native English, such as ADVERSATIVE-\(x\), and ADDITIONAL-\(x\). At the same time, they tend to underuse other types of combinations, which are less prototypical but equally acceptable. Again, third and fourth year learners exhibit a more native-like production of stepwise orientations.

Three things should be noted about these results. In the first place, while stepwise orientations produced by first and second year learners differ significantly from native stepwise orientations on all three counts (syntactic, semantic, layer modification), stepwise orientations produced
by third and fourth year learners do not. This could indicate a growing sense of how to use complex beginnings (obviously, it could also indicate a better-matching control corpus). In the second place, all three differences suggest that first and second year learners produce more stepwise orientations of the _However, in Britain_ and _For example, in 1992_ type. These both belong to the stepwise orientation-type that forms a minimal pair with complex orientations (i.e. _In Britain, however_ and _In 1992, for example_). This again supports the earlier suggestion that learners’ overproduction of stepwise orientations is related to their underproduction of complex orientations. It may be the case that in situations where a complex orientation would have been the most elegant choice a learner, for various reasons, still constructs a stepwise orientation. Finally, the fact that learners underproduce same-layer stepwise orientations (as exemplified in [2] again) may indicate a lesser tendency towards clause combining. Same layer stepwise orientations often include, for instance, a causal clause, followed by a temporal phrase followed by the main clause, as in the example in (2a) below:

(2) a _Because no one had come to form a new partnership, within 30 minutes_ everybody was unburdening themselves on the subject of men, women, sex, fears, expectations. [NEC 76-227]

Learner’s reluctance to construct such combinations may suggest that they prefer to explain a causal chain in a set of separate sentences:

(2) b No one had come to form a new partnership. _As a result, within 30 minutes_ everybody was unburdening themselves on the subject of men, women, sex, fears, expectations. [constructed]

The passage in (2a) contains a same-layer stepwise orientation, the one in (2b) a high-low stepwise orientation. If such as paraphrase as in (2b) is indeed what learners do, then this may explain learners’ overuse of stepwise orientations in general and high-low stepwise orientations in particular (see also Chapter 7).

6.6 Grounded orientations in the LEC
With regard to grounded orientations (_Over the past few years, under Blair, things have changed radically_), Chapter 4 established that (1)
syntactically speaking, they generally achieve their grounding function with a clause or prepositional phrase in second initial position, (2) semantically speaking they tend to feature a temporal, spatial or causal adverbial in second initial position and (3) with regard to layer modification the majority of the grounded orientations contain adverbials where both function at the same sentence layer. Comparisons between the three subcorpora of the LEC yielded no significant results for any of the properties (with N=58, the results of the chi-square tests were: syntactic realization: $\chi^2[4]=5.07$, $p=.280$, C=.28; and semantic function $\chi^2[4]=4.92$, $p=.296$, C=.28; layer modification could not be tested since too many cells had an expected value of n<5). Presumably, therefore, the grounded orientations produced within the groups are very much alike.

When we compare the LEC’s grounded orientations to grounded orientations in the NEC, again no significant differences could be observed. Note however that for first year texts versus News texts and for third and fourth year texts versus Academic texts none of the properties (syntactic realization, semantic function and layer modification) could be tested, due to low frequency of grounded orientations in both corpora. For the second year texts versus the News texts, however, the chi-square test for syntactic realization yielded $\chi^2[2]=.66$, $p=.719$, C=.06 and for semantic function the results were similar: $\chi^2[2]=.72$, $p=.698$, C=.07. Layer modification, again, could not be tested.

In fact, the plain observation that due to lack of frequency so few tests could be carried out for this comparison in itself reveals the most important difference between learner and native use of grounded orientations: learners produce dramatically fewer grounded orientations than native speakers do. However, those that are produced are very similar to native grounded orientations.

6.7 Complex orientations in the LEC
With regard to complex orientations (i.e. In Britain, however), Chapter 4 established a set of features that is exactly in contrast with the features that were assigned to stepwise orientations. That is, syntactically speaking, complex orientations have an adverb phrase in second initial position (stepwise have them in first) preceded by another type of realization. Semantically speaking they tend to consist of an adversative, causal, additional or attitudinal function preceded (rather than followed)
by some other semantic function and (3) with regard to layer modification the majority of the complex orientations exhibit a higher layer preceded (again rather than followed) by a lower layer. With the exception of semantic function, learner complex orientations exhibit the same preferences. In fact they do so to such an extent that the alternative cells
are all but empty (Tables 6.12a-6.12c). As a result, statistical tests are superfluous.

With regard to semantic function in this type of complex beginning, learner complex orientations are less varied than native speaker complex orientations. Learners limit themselves to the X-ADVERSATIVE (*In Britain, however*) and X-ADDITIONAL (*In Britain, for example*) types. This preference seems more or less consistent throughout the years. Especially interesting is the lack of X-ATTITUINAL combinations (i.e. *In Britain, of course*). Consider Table 6.13 for extra support for the differences between native speakers and learners with regard to semantic functions of adverbials in complex orientations. (In this table first and second year results are combined; also the category X-CAUSAL is combined with the category OTHER).

An interesting conclusion resulting from the analysis of all three major types of complex beginning is that while the learner grounded and complex orientations are remarkably similar to native speaker ones, learner stepwise orientations differ significantly from native stepwise orientations on all three counts. At the same time, stepwise orientations are produced most, while both complex and grounded orientations are underproduced. Another interesting conclusion is that the differences seem to decrease throughout the years: first and second year learner complex beginnings differ from native complex beginnings in the News corpus, while third and fourth year complex beginnings are very much like the native complex beginnings in the Academic control corpus.

<table>
<thead>
<tr>
<th></th>
<th>X-Adversative</th>
<th>X-Additional</th>
<th>X-Attitudinal</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (NEC)</td>
<td>(n=66)</td>
<td>61</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>First and second year (LEC)</td>
<td>(n=97)</td>
<td>64</td>
<td>31</td>
<td>2</td>
</tr>
</tbody>
</table>

**Chi-square Test**

\[ \chi^2[3]=25.44, \ p<.001, \ C=.37 \]

Table 6.13: Semantic function of complex orientations in News (NEC) versus First and Second year (LEC) (scores are in percentages)
6.8 Orientational clashes and overloads in the LEC

Two other types of complex beginnings require discussion, namely orientational clashes and orientational overloads. Section 4.6 defined an orientational clash as a complex beginning that is most like a stepwise orientation, but in which the two adverbials in the orientation end up in a clash as a result of the cognitive strain on processing two independent orientations. The sentences in (3) and (4) exemplify orientational clashes found in the NEC and the LEC respectively.

(3) a At the moment, at night I'm taking more asthma drugs to help me breathe more easily. [NEC 177-403]
   b As a child, one day she saw the voodoo man leaving her home. [NEC 176-401]

(4) a Until recently, in Russia things were very different. [LEC 1-1-4]
   b In this way, within eight minutes the Ministry of Justice had lost all control over six criminals who belong to the most dangerous in the Netherlands. [LEC 2-66-257]
   c After the downfall of the United Republic, the French era and the United Kingdom, by the end of the nineteenth century the Kingdom of The Netherlands was created. [LEC 2-78-281]

An orientational overload, in contrast, is defined as thematically heavy, while the Rheme is practically empty of new information (Ventola 1995:100). The examples in (5) are illustrations of orientational overloads encountered in the LEC. No orientational overloads were encountered in the NEC; that is, some of the NEC examples did exhibit a Rheme which encompassed just a lexical verb – see the examples in (6) – but in none of those cases was this verb ‘communicatively empty’.

(5) a As most pupils at the age of seventeen or eighteen do not know yet what they eventually would like to become, often choices on the wrong motivations are made. [LEC 1-111-140]
   b Secondly, in the case of monetary union the progress has been made. [LEC 2-38-212]
   c Nevertheless, with the establishment of the European Monetary System (EMS) by the European Community (EC) in 1978 a first move towards a better monetary policy was made. [LEC 2-41-215]
(6) a In the 1880s, when Marianne North and Constance Gordon Cumming accepted an invitation to meet Isabella Bird Bishop, their lion-hunting London hostess was overjoyed. [NEC 3-24]
   b One day, finding him at the riding club with his mistress, she snapped. [NEC 56-195]
   c To make matters still worse, in an attempt to help meet the cost of introducing editorial colour and more active promotion, the cover price of our titles was raised. [NEC 188-426]

However, while the results from the corpus analyses suggest that learners produce more orientational clashes and more orientational overloads than native speakers do, neither sentence opening was produced frequently enough to allow for statistical testing. This means that discussion of these types of complex beginning will need to be postponed to Chapter 9, which will report on the results of an experiment, that – among other things – tests the acceptability of orientational clashes for native speakers and for learners and that attempts to elicit orientational clashes.

6.9 Observations and hypotheses
The comparison between the LEC and the NEC yielded the following differences:

\textit{With regard to frequency of complex beginnings (Section 6.3)}

- Second year learners produce more complex beginnings per 100 sentences than first year learners do.
- First and second year learners produce more complex beginnings per 100 sentences than native writers of newspaper texts do.
- For first year, second year, and third and fourth year learners the same pattern of use can be established: fairly many writers produce either no complex beginnings or many complex beginnings (see graph 6.6 and 6.7).

\textit{With regard to types of orientations (Section 6.4)}

- First, second and third and fourth year learners produce no compound orientations.
- First, second and third and fourth year learners produce hardly any composite orientations (just 2 on a total of 148 first year complex beginnings, 447 second year complex beginnings and 66 third and fourth year complex beginnings).
Third and fourth year learners produce more complex orientations than first and second year learners do. 
First and second year learners produce fewer grounded orientations than native speakers do. 
First and second year learners produce fewer complex orientations than native speakers do. 
First and second year learners produce more stepwise orientations than native speakers do.

With regard to stepwise orientations (Section 6.5)
- First and second year learners overproduce adverb-x type of stepwise orientations.
- First and second year learners overproduce ADVERSATIVE-x and ADDITIONAL-x type of stepwise orientations.
- First and second year learners overproduce high-low order in stepwise orientations (and underuse same layer orders)

With regard to grounded orientations (Section 6.6)
- No significant different between LEC and NEC could be observed, safe for the one made above already, namely that learners produce dramatically fewer grounded orientations than native speakers do.

With regard to complex orientations (Section 6.7)
- First and second year learners produce more X-ADDITIONAL and fewer X-ATTITUDINAL type of complex orientations

With regard to orientational clashes and overloads (Section 6.8)
- No statistical tests could be carried out.

The observed differences listed above show two things. In the first place, with regard to number of complex beginnings and type of complex beginnings a developmental aspect can be discerned. That is, third and fourth year learners produce more complex orientations and fewer stepwise orientations than first and second year students do. In the second place, when the LEC is compared to the NEC, the number and type of complex beginnings produced by first and second year learners differ from those produced by native speakers: the learners produce more stepwise orientations in general and also more high-low stepwise orientations in particular. They underproduce all other types of orientations.

In Chapter 1 it was suggested that possible differences between native and learner complex beginnings may be due to differences
between level of language competence and to differences between level of discourse competence. Finally, in Section 6.2 it has also been suggested that differences observed between native and learner complex beginnings may be due to a mismatch between the NEC and the LEC. In order to test these hypotheses, the following investigations need to be carried out.

Firstly, when talking about sentence grammar, it needs to be established to what extent the particular differences between native and non-native speakers may be the result of particular L1-features (i.e. a strict verb-second pattern in Dutch) and to what extent the differences may be the result of TL-features (i.e. English is not hospitable to sentence-medial adverbs). Chapter 7 will therefore provide (1) a (limited) contrastive analysis of Dutch and English sentence grammar (including issues regarding information distribution); and (2) an analysis of complex beginnings encountered in a Dutch corpus.

Secondly, any explanation referring to discourse competence should at least take into account that a fledgling discourse competence may be language-specific or more universal. That is, should investigation of learner complex beginnings in their context yield the conclusion that learners do not set up global text strategies and do not construct complex beginnings that provide the best textual fit in the contexts that they do produce, then this only says something about their discourse competence in English and no conclusion with regard to their discourse competence in general is justified (see e.g. Mauranen 1996). Chapter 7 will therefore report on an (again limited) contrastive rhetorical analysis of Dutch and English, which zooms in on the text-structuring functions of initial adverbials in both languages. It will furthermore present a study of Dutch complex beginnings in their contexts and it will again look at information distribution in sentences, but this time from a discourse perspective.

Discourse competence can also be examined in another way: assuming that expert writers have achieved a higher level of discourse competence than novice writers, differences between native and learner complex beginnings may also be due to the different levels of writing experience that students and journalists have achieved. Several writing process models have found differences between the way expert writers and novice writers go about their writing tasks. It has for instance been established that novice writers tend to spend less time and energy on planning, editing and re-writing than expert writers do (Scardamalia and Bereiter 1987, Flower and Hayes 1981). Since Chapter 5 has established
that complex beginnings play a role in the organization of a text, it does not seem far-fetched to hypothesize that the amount of energy spent on both planning and editing has an impact on the frequency and quality of the complex beginnings. Chapter 7 will therefore also discuss some of the theories on writing processes, and Chapter 8 will describe the design of an experiment set up to uncover the construction process behind the production and non-production of complex beginnings. Chapter 9, finally, will report on the results of this experiment.

Notes

1 Third and fourth year texts were placed in one category. The reason for this is that at the University of Amsterdam it is possible to take fourth level subjects in your third year, and third level subject in your fourth year. It was therefore impossible to establish whether at the time of writing the student who wrote a particular text was a third or fourth year student.

2 Note that even if first and second year essays should be considered academic texts, the distribution in the learner texts differs significantly from the distribution in the academic subcorpus. A chi-square test comparing first year texts to academic texts yields $\chi^2[2]=11.52$ and $p=.003$; a chi-square test comparing second year texts to academic texts yields $\chi^2[2]=16.96$, $p<.001$.

3 See also De Haan (1999) who reports on studies that show that Dutch learners produce less informative texts than native English students do. According to De Haan, Dutch students “can produce virtually errorless English, [but they] may not be so efficient in putting a message across” (1999:205).
7

Learner and native complex beginnings: sources for differences

7.1 Introduction
Chapter 6 established that complex beginnings produced by first and second year Dutch learners of English differ in number and type from complex beginnings produced by native speakers of English. In a contrastive corpus analysis, Dutch learners were shown to produce more complex beginnings in general than native speakers do, while at the same time their repertoire is more limited: complex, grounded, compound and composite orientations are underproduced, and stepwise orientations are massively overproduced. Section 6.9 suggested two potential sources for these differences, namely different level of language competence and different level of discourse competence. This last source may become apparent in the quality of the texts that writers produce and in their judgments of texts produced by others, but it may also show itself when writing processes of expert writers and novice writers are compared. This chapter will systematically investigate these sources. Sections 7.2-7.4 will discuss what, if any, influence differences between English and Dutch sentence grammar may have on the construction of learner complex beginnings. Sections 7.5-7.8 will do the same for differences between English and Dutch text organization. Finally, Sections 7.9 and 7.10 will investigate various writing process models. Throughout all of these discussions the focus will regularly be directed towards the third and last perspective from which this study examines complex beginnings (the first one being a form-function perspective and the second one a language acquisition perspective), namely the production process of complex beginnings. Section 7.11, finally, will summarize.
7.2 Comparison of English and Dutch adverbial placement

When introducing language competence as a possible source for learners’ deviant language output, a first step is often to examine if and to what extent the grammar of the L1 facilitates (positive transfer) or interferes with (negative transfer) the production of a particular construction.¹ This section will therefore compare rules for adverbial placement in English with rules for adverbial placement in Dutch (Gass and Selinker 1992:3).

The first thing to establish in this respect is that Dutch exhibits the same wide range of syntactic realizations, semantic functions and layer modifications for adverbials as English does (Hasereyn et al. 1997:907ff). Moreover, all realizations, all semantic functions and almost all layer modifications can be placed in initial position (Hasereyn et al. 1997: 1262, 1263ff, 1277, 1281), in Dutch even more easily so, it is claimed, than in English (e.g. Dik 1997a:43).² The main difference that Hasereyn et al. report on in this respect is, however, very relevant for this study: many rhetorical adverbials and some propositional adverbials cannot be placed sentence-initially in Dutch. (1997:1278; see for similar observations of differences between English and Germanic V2-languages Hasselgård 1997 and Altenberg 1998):

(1) a In Nederland
doen ze het echter anders.
In the Netherlands
do they it however differently.

b *Echter/bijvoorbeeld
Nederland.
do ze het anders in
However/for example
Netherlands.
do they it differently in the

This means that in Dutch one has to resort to other realizations than initial adverbials if one wants to start a sentence with, for instance, a contrastive or additive orientation.

With regard to clusters of adverbials, the differences between English and Dutch adverbial placement are also interesting for the study of complex beginnings. English and Dutch recognize the same major clause positions – initial position, medial position and final position (Hasereyn et al. 1997, Leech and Svartvik 1992: 197) – but in both languages these positions may host different types and different numbers of adverbials:
In English initial position is marked off by the Subject and, as the previous chapters have amply shown, this position can easily host more than one adverbial. In Dutch, a verb-second language, initial position is marked off from the rest of the sentence by the finite verb form and it is claimed that it can host only one element, generally the grammatical Subject or an adverbial (hence the classification verb-second) (Hasereyn et al. 1997:1261ff). Medial position, furthermore, refers in English to the sentence elements that are placed between the Subject and the last argument. In Dutch it refers to the elements between the finite and non-finite verb forms. For English, the adverbial slots in this part of the sentence are reserved for short adverbs (Leech and Svartik 1992:198) and one is advised to avoid adverbial clusters in these positions (ibid. 201). For Dutch, sentence-medial position is open to almost all types of adverbials and, significantly, also to adverbial clusters. End-position, finally, refers to those elements that follow the last argument (in English) or the last non-finite verb form (in Dutch). Consider for an illustration of these positions the examples in (3). In the English sentence in (3a) initial and medial position are separated by the Subject you and medial and final by the argument in the water. The final position is empty. In the Dutch sentence in (3b) initial and medial position are separated by the finite verb form heeft (‘has’) and medial and final are separated by opgerold (‘rounded up’). In this sentence, too, the final position is empty.

(3) a On the St Petersburg waterfront, if you don’t pay the right people you may find that the crane operator will drop your cargo in the water.

(2) a English

<table>
<thead>
<tr>
<th>Position</th>
<th>Subject</th>
<th>Medial</th>
<th>Last Argument</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Subject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>medial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>last</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>final</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b Dutch

<table>
<thead>
<tr>
<th>Position</th>
<th>finite verb form</th>
<th>Medial</th>
<th>last non-finite verb form</th>
<th>Final</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
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</tr>
<tr>
<td>medial</td>
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<tr>
<td>last</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>final</td>
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</tbody>
</table>
According to a recently received message, the State Police in Antwerp this morning accidentally a drugs gang rounded up.

The difference between the number of adverbials that English and Dutch can host sentence-initially suggests that in English complex beginnings are acceptable, while in Dutch they are not. However, Dutch does not categorically resist multiple filling of sentence-initial position. Especially with regard to complex beginnings, this has significant consequences. The following exceptions to the ‘one element in initial position’-rule are all cited in Hasereyn et al. (1997:1297ff):

(4) a Kort samengevat, in Amsterdam willen ze het gewoon niet. (1997:1393)
   Briefly put, in Amsterdam they were simply not interested.

b Maar ‘s anderendaags, weer nuchter, weer op kantoor, lopend in de tredmolen van het dagelijks werk, waren ze weer vijanden. (1997:1300)
   But the next day, sober again, at the office again, continuing in the treadmill of daily work, they were enemies again.

c Later, als ambassadeur bij de VN, onderhandelde hij met de Chinezen. (1997:1300)
   Later, as a UN ambassador, he negotiated with the Chinese.

d Gisteren echter was het weer heel wat mooier. (1991:1297)
   Yesterday however the weather was a lot better.

e Morgen aan de Zwarte Zee kun je lekker beginnen te luieren. (1997:1301)
   Tomorrow on the Black Sea beach you can start to relax.
Interestingly enough, these examples represent each and every type of the complex beginnings that can be encountered in English. Sentences (4a) and (4b) start with a stepwise and a compound orientation respectively. Sentences (4c), (4d), and (4e) start with a grounded, a complex and a composite orientation. Notice also that in (4a) a comma separates the first adverbial from the rest of the sentence. This suggests that this first adverbial is extra-clausal. In fact, this is exactly how it should be analyzed according to Hasereyn et al., who explicitly state that in this example *Kort samengevat* (‘Briefly put’) is positioned in “de Aanloop”, a position that has a lot of functionality in common with FG’s P2-position (see Chapters 2 and 5) (Hasereyn et al. 1997:1393ff; see also Auer’s [1996] definition of pre-frontfield).

The above comparison of Dutch and English adverbial placement shows that all types of complex beginnings that are possible in English are possible in Dutch as well, even though they are presented as exceptional in Dutch. This could be considered a source for positive transfer. On the other hand, the description of Dutch adverbial placement also implies that in Dutch adverbial clusters occur more readily in sentence-medial position than in sentence-initial position. This suggests that Dutch sentence grammar does not facilitate the production of complex beginnings. More information is needed, and therefore, Section 7.3 will analyze the complex beginnings encountered in a Dutch corpus, while Section 7.4 will subsequently formulate a language competence hypothesis based on the above description and the results of Section 7.3.

### 7.3 The Native Dutch Corpus (NDC)

The Native Dutch Corpus (henceforth NDC) was especially compiled for this study and contains 238,432 words, and 15,737 sentences (181 texts, 15.2 words per sentence on average). It consists of Dutch newspaper articles on topics similar to the newspaper texts in the Native English Corpus (NEC) and the first and second year essays in the Learner English Corpus (LEC). All texts were electronically available, but none were tagged. The corpus yielded a total of 60 complex beginnings, which is .80 complex beginning per 100 sentences (see Table 7.1). This is significantly fewer than either the NEC (1.8) or the LEC (3.0) yielded (\(p<.001\)) and that suggests that it is not likely that Dutch learners' overuse of complex beginnings in English is facilitated by the frequency of complex beginnings in their L1.
When the 54 NDC complex beginnings consisting of two adverbials are classified according to orientation, analysis shows that the Dutch corpus yields – proportionally – more grounded orientations and fewer complex, compound and composite orientations than the NEC does. Stepwise orientations account for the same proportion of complex beginnings in the NDC as in the NEC. Although these results may be interpreted as an explanation for Dutch learners’ underproduction of complex orientations, it does not explain why they also underproduce grounded orientations, let alone why they overproduce stepwise orientations.

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>grounded</th>
<th>other orientations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (NEC)</td>
<td>147 (149)</td>
<td>130 (139)</td>
<td>101 (90)</td>
<td>378</td>
</tr>
<tr>
<td>News (NDC)</td>
<td>23 (21)</td>
<td>29 (20)</td>
<td>2 (13)</td>
<td>54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>170</strong></td>
<td><strong>159</strong></td>
<td><strong>103</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

**Chi-square Test**  
$\chi^2[2]=15.45, \ p<.001, \ C=.19$

If we look at the internal structure of each of the five orientations, we see that Dutch complex beginnings do not differ much from their English counterparts. Consider for instance the internal structure of some of the stepwise orientations in the NDC. Just like in English, the majority consist of two adverbials, the first one of which modifies a rhetorical or
interpersonal level of the clause while the second one modifies the representational layer. The sentences in (5) are examples (the translations of these and other Dutch examples in this chapter are mine):

(5) a  **Integendeel**: **qua kansen (op arbeid, inkomen of onderwijs)** was er eerder van verbetering dan van verslechtering sprake.  
[NDC 1-1]  
**On the contrary** with respect to chances (for jobs, income or education) the situation improved rather than worsened.

b  **Anders gezegd, opnieuw** is het morele gehalte van het Amerikaanse buitenlandse beleid in het geding. [NDC 11-3]  
**Put differently, again** people question the morals of the American foreign policy

c  **Immers, pas als het op de uitvoering van de plannen aan komt**, ontwaken de direct gedupeerden. [NDC 16-6]  
**After all, only when they actually start to carry out the plans will** the people that'll suffer most wake up.

Notice that in sentences (5a) and (5b), the writer used a colon to separate the first adverbial rather drastically from the unit formed by the second adverbial and the sentence (this was the case in 5 more examples); in the other two sentences commas were used to achieve the same end. This strategy may need to be resorted to, in order to avoid the ‘one element in initial position’-rule.

Only five out of twenty stepwise orientations exhibited two adverbials that both modify the representational layer of the main clause. The acceptability of three of these five stepwise orientations is, however, doubtful, and they should rather be classified as orientational clashes than as stepwise orientations. The two examples that are acceptable are in (6), the three that are not are given in (7):

(6) a  **Als dat wél zo was geweest, wie weet** zou dan de rol van de verwekker iets meer aan de orde zijn gesteld in de wet. [NDC 36-11]  
**If that had indeed been the case, who knows**, the role of the natural father might then have received more attention in the law.
Is in Richard II een moord nog een tragedie die met een opera-achtige ernst omgeven moet worden, een paar koningen later wordt er gedood met de luchthartigheid van hedendaagse actiefilms. [NDC 68-15] While in Richard II a murder is still a tragedy that has to be shrouded in opera-like earnest, a few kings later the killing is accompanied by a lightheartedness more associated with modern-day action films.

During last weekend’s tests, at speeds up to 180 kilometers per hour the train and the ground behaved exactly as the models had predicted.

For these tests, at five spots that are representative for the condition of the underground transportation the measurements are carried out with the help of transportation meters.

At the moment itself, as one of the runners you don’t quite agree, since all those onlookers were so close at the route and they were rather bothering you.

Grounded orientations, too, exhibit some of the same patterns in Dutch as they do in English. Consider the two examples in (8). In these sentences the second adverbial either indicates relevance (8a), or specifies the framework evoked by the first adverbial (8b) (n = 31); both of these patterns were present in English as well (see Chapter 4):

Al in 1991, barely two years after his taking office, corruption was past bearing.
b  
Bij het Europees Kampioenschap in Duitsland, in 1988, hebben de Nederlandse sides pogingen gedaan om gezamenlijk tegen de Engelsen en Duitsers op te trekken. [NDC 95-26]
During the European Championship in Germany, in 1998, the Dutch sides attempted to march collectively against the English and the Germans.

However, English has one more type of grounded orientation that is not represented in this Dutch corpus. In English, some grounded orientations potentially form a minimal pair with a stepwise orientation. That is, when the initial adverbials in the grounded orientation are reversed, the result is a stepwise orientation. The example in (9) was earlier presented in Chapter 5:

(9) a  [stepwise]: In 1993, because of the drop in the birth rate in the Seventies, there were actually one fifth less young people in Britain than in 1987. [NEC 110-312]
b  [grounded]: Because of the drop in the birth rate in the Seventies, in 1993, there were actually one fifth less young people in Britain than in 1987. [constructed]

None of the grounded orientations in Dutch potentially form a minimal pair with a stepwise orientation, nor do any of the Dutch stepwise orientations potentially form a minimal pair with a grounded orientation.

The last two orientation types that were encountered in the NDC, composite orientations and complex orientation (see examples [10a] and [10b] respectively), also follow the patterns already established for the English versions of these types. However, both orientations occur only once in the NDC, so it is impossible to say if these constellations are typical or exceptional.

(10) a  Later in Ostende zag hij die Engelsen voetbal spelen. [NDC 15-5]

Later in Ostende he saw those same Englishmen play soccer.
b  In de eerste casus bijvoorbeeld sterft iemand een langzame verstikkingsdood. [NDC 8-27]

In the first case, for instance, someone dies very slowly of suffocation.
Chapter 7

The NDC yielded no instances of compound orientations, but as example (4d) in section 7.2 showed, Dutch does allow them, and the structure of the examples provided by the Hasereyn et al. (1997) is, again, similar to the structure of English compound orientations.

This corpus analysis leaves us with the following conclusions. With the exception of one type of grounded orientation (the one that forms a minimal pair with a stepwise orientation) and one type of stepwise orientation (the one that forms a minimal pair with a grounded orientation), all types of complex beginnings occur in Dutch, but they occur much less frequently in Dutch than they do in English. This cannot explain therefore learners’ overuse of complex beginnings in general. Furthermore, a large proportion of the Dutch complex beginnings can be classified as stepwise orientations, but this proportion is the same for English complex beginnings, so just looking at the frequency in English and in Dutch does not explain learners’ overuse of stepwise orientations in particular. Grounded orientations, finally, occur proportionally speaking most in Dutch but hardly at all in learner English, so here too, there is no evidence for transfer, be it positive or negative. Only complex, compound and composite orientations occur infrequently in both Dutch and in learner English, and it could therefore be hypothesized that the reason for their underrepresentation in learner English lies in their relative infrequency in Dutch. This does not imply, however, that the role of transfer is automatically limited to these last three orientations. It may still be the case that the rules for adverbial placement in Dutch interact with those in English and still trigger the production of particular types of complex beginnings. Section 7.4 will discuss this further.

7.4 The language competence hypothesis

Even though Section 7.3 showed that the form of Dutch complex beginnings is very similar to the form of English complex beginnings, there are nevertheless fundamental differences between English and Dutch adverbial placement (see Section 7.2). To recapitulate: in the first place some rhetorical adverbials, such as the equivalents for however and for instance, cannot be the only constituents in sentence-initial position in Dutch (the canonical position for these elements is sentence-medial, although they can combine with other elements in sentence-initial position); in the second place, Dutch allows almost all types of adverbials in sentence-medial position, while English reserves this position for short
adverbs; in the third place, Dutch allows adverbial clusters in sentence-medial position while English facilitates sentence-initial clusters of adverbials; in the fourth place, finally, in Dutch it is more likely to find an adverbial in sentence-initial positions than it is in English. I will first consider the possible impact of these differences on the production of orientational overloads and orientational clashes and will then extend the discussion to the overproduction of stepwise orientation and underproduction of complex orientations.

Suppose a learner is aware of at least some of the restrictions that English places on adverbial placement in sentence-medial position, while she at the same time knows about English hospitality towards clusters of adverbials in sentence-initial position. Rules to this effect are taught early on in their English training, so neither assumption is unlikely (see for instance *Stepping Stones*, a method used to teach English in the lower grades of many Dutch high schools). This means that when a Dutch learner writing in English chooses the same syntactic constituents for her information units as she would in Dutch, she is stuck with adverbials that she could place sentence-medially in Dutch but which cannot be placed in that same position in English. According to Connor (1996:3) such a translation strategy is not uncommon for L2-writers; consider also Harley (1989) who shows that English students of French transferred English modes of distribution of semantic information across syntactic elements to their French writing. The learner now has a few choices. She can, for instance, recode her information (different syntactic units, possibly resulting in packaging the information in more than one sentence unit, or compacting the adverbial information into, for instance, the Subject NP) or she can move her syntactic units around to positions which she feels are available for adverbial elements in English. If she goes for the second option English rather prominently offers initial position as a possibility. The learner, who is not used to clustering adverbials sentence-initially, may not be fully aware (or not aware at all) of the constraints that English, too, places on sentence-initial adverbial clusters. She furthermore may not realize that placing the adverbial information sentence-initially – while English sentence grammar at the same time requires the subject to precede the finite verb form as well – leaves her with a relatively heavy thematic part and a light rhematic part of the sentence. In the example in (11) this process results in an orientational overload:
This hypothesis is supported by Ventola’s translation example, which was discussed before (see Chapters 2 and 4). Again the steps result in an orientational overload:

(12) step a: original message in German:
In der vielfältig aufgefächerten Ethikdiskussion werden neben den Gefahren-potentialen spezieller Problembereiche (Kernkraft, Gentechnik, Informations-technologie) die Möglichkeiten für eine ‘rationale’ Techniksteuerung und für eine verantwortungsvolle Selbstbeschränkung diskutiert. (Lenk, Zimmerli)

step b: translation using similar syntactic units (this step is constructed):
In the diversified ethics discussion are being debated aside from the potential dangers of special problem areas (nuclear energy, genetic engineering, information technology) the possibilities for a ‘rational’ guidance of technology and a responsible self-limitation

step c: place the adverbials:
In the diversified ethics discussion, aside from the potential dangers of special problem areas (nuclear energy, genetic engineering, information technology), the possibilities for a
‘rational’ guidance of technology and a responsible self-limitation are being debated. (Ventola 1995:100)

For an example of the steps leading to an orientational clash, consider the constructed example in (13).

(13) step a: building the message:
Gisteren heeft een van de patienten op de Eerste Hulp een kamer in elkaar geschopt. (or: Een van de patienten heeft gisteren op de Eerste Hulp een kamer in elkaar geschopt.)
step b: translation using similar syntactic units:
Yesterday / wrecked / a patient / in the ER / a room
step c: place the adverbials:
Yesterday, in the ER
step d: adjust the rest of the sentence and place it after the adverbials:
Yesterday, in the ER a patient wrecked a room.

This stepwise process of the construction of complex beginnings will be referred to as the language competence hypothesis, on the assumption that it is a lack of language competence that inspires this particular starting point and the resulting sentence building process.

If we recall that another major difference between Dutch and English is the fact that in Dutch rhetorical adverbials are generally placed in sentence-medial position, while in English they are preferred in sentence-initial position, then it is easy to see how, if there is any merit in the language competence hypothesis, it may also begin to explain Dutch learners' overproduction of stepwise orientations. The steps in (14) illustrate this:

(14) step a: building the message:
In Nederland doen ze het echter anders.
step b: translation using similar syntactic units:
In the Netherlands / do / they / things / however / differently
step c: place the adverbials:
However, in the Netherlands
step d: adjust the rest of the sentence and place it after the adverbials:
However, in the Netherlands they do things differently.
The rhetorical adverbial has a natural thematic status (Halliday 1994:53, Altenberg 1998:124) and it makes sense therefore that, when moved from sentence-medial position, it ends up sentence-initially, rather than sentence-finally. The question, of course, is then why it ends up in absolute initial position, creating a stepwise orientation, rather than in second initial position (In the Netherlands, however), creating a complex orientation.

One reason may be that learners are not aware of the possibility of creating complex orientations. Though complex orientations are possible in Dutch, they occur infrequently. If this is what is going on, then this is a case of negative transfer. Another option is that creating a stepwise orientation may demand fewer cognitive resources than a complex orientation does. A complex orientation requires at least some analysis of the SoA that is conveyed by the predication, since the rhetorical adverbial in the complex orientation cuts off one of the elements from this SoA in order to fulfill a special task (i.e. extra emphasis, textual development, etc.). This may simply require too much of an L2-learner. In order to reduce the cognitive strain of writing in an L2, she may decide to simply first go for a local connection with the preceding text (i.e. grab the rhetorical adverbial and place it sentence-initially), and then concentrate on expressing the entire SoA (including its location on temporal and spatial axes). Alternatively, she may first concentrate on expressing the SoA and then attach the rhetorical elements to the resulting predication. Notice that this alternative procedure creates more chances of a complex orientation than the original one does: in the second procedure the rhetorical adverbial still needs to be placed when the SoA has been dealt with. This means that the Conjunct can be inserted in, as well as attached to either end, of the predication. When, on the other hand, the rhetorical adverbial is already placed – and in a position that is grammatically acceptable, too – the chances of it being picked up and moved around may be smaller.

In order to see if the language competence hypothesis holds any merit, an experiment would need to test the following questions:

- Are learners aware of the complications of an orientational clash?
- Are learners aware of the complications of an orientational overload?
- Do learners know about the possibility of constructing a complex orientation?
• Do learners begin the construction of their sentence with an adverbial when given the option?
• Do learners begin the construction of their sentence with a rhetorical adverbial when given the option?

Chapter 8 will indicate how this study proposes to examine these questions with the help of an exploratory online psycholinguistic experiment.

7.5 Discourse competence
The second source that may have caused differences between LEC and NEC complex beginnings is different levels of discourse competence. Chapter 1 defined the notion of discourse competence as both being aware of what is appropriate in a specific text genre and being able to chain together a coherent set of messages. Throughout this study it has become obvious that there is indeed a relation between form and use of complex beginnings on the one hand and genre and a writer striving for coherence on the other hand. With regard to genre-appropriateness, for instance, it was shown that complex and stepwise orientations occur more in academic than in newspaper texts, whereas grounded orientations occur more in newspaper than in academic texts. With regard to coherence, it was shown that the relative order of the adverbials in a complex beginning supports or initiates the text strategy of a passage and, as is amply shown in other studies, a consistent text strategy is one of the means employed to produce a coherent text.

The discourse competence of the writers who produced the texts in the LEC and the NEC differs on two counts. As less-experienced (i.e. non-professional) writers, the Dutch students may have achieved a lower degree of generalized discourse competence (Carson and Kühn 1992) than the English journalists, who, after all, are professional writers. In other words, the Dutch students may know less about structuring texts in general, regardless of the language the text is written in. As non-native speakers of English, furthermore, the Dutch students may have achieved a lower degree of language-specific discourse competence. That is, even when they can build grammatically correct English sentences and even when they have achieved an advanced level of discourse competence in Dutch, they may still have a hard time structuring a text according to English discourse principles. For complex beginnings a difference in generalized discourse competence may, for instance, translate as learners
limiting themselves to just one type of text strategy when organizing their text, or as learners not being able to recognize a text strategy. A difference in *language-specific competence* may translate as Dutch preferring other text strategies than English does and learners transferring these Dutch strategies to their learner English. Section 7.6 will compare text organization principles in Dutch and in English newspaper texts and it will also analyze contexts of Dutch complex beginnings and compare these to the contexts of English complex beginnings (see Chapter 5). If either comparison reveals any differences, then it is likely that the factor *language-specific discourse competence* plays some role in the explanation of Dutch students' deviant production of complex beginnings. Section 7.7 will subsequently focus on text strategies employed in learner English and compare these to both Dutch and English text strategies. If Section 7.6 reveals no differences between Dutch and English, but there are differences between learner English and native English and/or between learner English and Dutch, then it is likely that lack of generalized discourse competence plays a role in the production of learner complex beginnings

### 7.6 Discourse organization in English and Dutch newspaper articles

It is taken for granted that a good text is well-organized, well-structured and meets the expectations of the reader. It has also been widely recognized, however, that well-structured, well-organized texts that meet the expectations of the reader differ from language to language (Grabe and Kaplan 1996:184, Connor 1996; Kaplan 1966). While in some discourse communities too much guidance may be considered an insult to the reader (i.e. Grabe and Kaplan 1996:189, Connor and Mayberry 1996), in others a text that leans too much on the reader for filling in transitions may be considered chaotic and hard to read. Statements such as these are often illustrated by comparing the oriental writing style – which is reader-responsible, quasi-inductive, and which prefers conclusions that only ask a question, indicate a doubt, or reach an indecisive endpoint (Hinds 1983a, 1983b, 1987) – to the English writing style – which is writer-responsible, characterized by clarity and transparency, and which prefers clear conclusions with a single point (consider for instance Hannay and Mackenzie’s checklist for text organization and conclusions 1996:335ff; see also Hannay and Mackenzie 1996:47). Another frequently quoted example is the series of studies conducted by Clyne, who compares
English writing to German writing (1983, 1985, 1987, 1991). According to Clyne, English readers often find German texts pretentious and haphazard in organization, while German readers perceive English texts as superficial. Clyne’s explanation for this difference is that in German the role of content is much more important than formal style and organization in writing, while, as pointed out above, native speakers of English find it very important that a text is well-organized and transparent.

Some studies have shown that experienced and non-experienced writers who compose texts in their L2 transfer the textual organization patterns of their L1 to their L2 (Grabe and Kaplan 1996:188). This section will, on a limited scale, investigate to what extent Dutch learners of English may do so when constructing complex beginnings. Consider the following observations made in earlier chapters. We found (1) that learner English yields more stepwise orientations than native English does (Chapter 6) and (2) that stepwise orientations fit best in contexts which are organized according to rhetorical strategies (Chapter 5). We also found (3) that learner English yields fewer complex and grounded orientations than native English does (Chapter 6) and (4) that these two orientations fit best in contexts which are organized according to temporal or spatial text strategies (Chapter 5). If a comparison between Dutch and English text strategies reveals that in Dutch texts rhetorical strategies are rather more frequent than in English texts, then it can be hypothesized that Dutch learners of English transfer their rhetorical organization of texts from Dutch to English and that they may produce so many stepwise orientations simply because these display the best textual fit. Alternatively, if we find that Dutch texts are organized in pretty much the same way as English texts are, but that nevertheless stepwise orientations are preferred in otherwise temporally or spatially organized texts, then again, it can be hypothesized that Dutch learners transfer their pragmatic use of the sentence-initial area from Dutch to English. In both cases it would suggest that effective use of complex beginnings in English may be a matter of language-specific discourse competence. Investigation of these issues involves a comparison of text strategies in Dutch and in English and a comparison of the contexts of Dutch and English complex beginnings so that it is possible to examine whether the internal order of complex beginnings in Dutch is driven by the same factors as the internal order of complex beginnings in English.
In order to compare text strategies employed in English and in Dutch, this study examined the openings of every tenth sentence in 25 English and 25 Dutch texts, randomly selected from the NEC and the NDC. If it is assumed that each sentence opening participates in some type of textual organization (see Fries 1995b, Daneš 1974), however limited in scope, this method allows a quick-scan comparison of preferred organizational patterns in newspaper articles in both languages. Because of the substantial role that stepwise orientations play in learner English, this quick scan mainly intends to bring to light a possible difference between the frequency of initial rhetorical elements and spatial/temporal elements in English and in Dutch. As a result the three categories according to which the sentence openings were classified were RHETORICAL ELEMENT, SPATIAL/TEMPORAL ELEMENT and OTHER. The category of rhetorical elements obviously includes rhetorical adverbials but also other elements that may function in a rhetorical chain, such as conjunctions and representational and interpersonal adverbials that fulfill argumentative Semantic Functions (i.e. CONCESSIVE, ADVERSATIVE, CAUSAL, etc.). Generally, of course, conjunctions are not included in counts such as these (see for example Altenberg 1998, Chapter 2 of this study; see also Hannay 2001 for a counter example). However, a pilot count showed that Dutch – which can after all not place echter (‘however’) in initial position – relies rather frequently on maar (‘but’) to start off a sentence with a contrastive or adversative orientation. Not counting the conjunctions may result in a skewed count, therefore, that could unjustly present Dutch as less rhetorically-oriented and more temporally/spatially-oriented than English is. In order to be able to determine the effect of including conjunctions, however, a score was kept of the proportion of conjunctions in the rhetorical category and of the elements that would have been considered sentence openers if conjunctions had been excluded in this scan. This means that a sentence starting with But in Britain is counted as starting with a rhetorical element when conjunctions are included in the count as starting with a temporal or spatial element when conjunctions are excluded. Both results are presented in Table 7.4.
Learner and native complex beginnings: sources for differences

As Table 7.3 shows, this quick-scan does not indicate that Dutch favors different elements in initial position than English does (note that these conclusions are based on a limited test; however, a full-scale comparison of textual organization in Dutch and English newspaper articles falls outside the scope of this study). There seems, therefore, no support for the hypothesis that Dutch and English prefer different text-organizational structures.

The next step is to look at the contexts of Dutch complex orientations and consider whether or not the internal order of complex beginnings is driven by the same principles as the internal order of English complex beginnings. Remember that in Chapter 5 it was established that the internal order of complex beginnings can be explained by the following principles:

(15) a  supporter major communicative goal ^ other adverbial
    b  supporter TSC ^ other adverbial (∗other adverbial’ could turn out to be initiator new local TSC)
    c  local TSC ^ global TSC (local TSC need to be established before or semantics of first-initial adverbial need to suggest initiation of new local TSC)
    d  adverbial that provides chaining link ^ other adverbial

<table>
<thead>
<tr>
<th>+ conjunctions</th>
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<th>Temporal or spatial</th>
<th>Other</th>
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<tr>
<td>Dutch (n=218)</td>
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<tr>
<td>Dutch (n=218)</td>
<td>12</td>
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</tr>
</tbody>
</table>

- conjunc. $\chi^2[2]=.86$, $p=.651$, $C=.05$

Table 7.3: Initial elements in Dutch and English compared
Remember also that in English it was possible to examine systematically contexts of stepwise, complex and grounded orientations: (1) because high-low stepwise orientations (i.e. *However, in Britain*) and complex orientations (i.e. *In Britain, however*) often functioned as potential minimal pairs; and (2) because often same-layer stepwise orientations (i.e. *Because of the massive drop in the birthrate, in the 1970s Britain...*) form a potential minimal pair with specific types of grounded orientations (i.e. *In the 1970s, because of the massive drop in the birthrate, Britain...*).

In Dutch it is more complicated to use this systematic approach to investigating complex beginnings, however. As stated in Section 7.3, the NDC did not yield any potential grounded/stepwise alternations, so such minimal pairs cannot be examined. With regard to complex/stepwise alternations, things are easier. Chapter 5 established that in English a complex orientation fits best in a context that is organized according to a temporal or spatial strategy (be it a local or global TSC). If we consider the context of the one complex orientation in Dutch, a similar analysis is possible. The passage in (16) is taken from a book review in a Dutch newspaper (the Dutch-English translations in this and other passages in this chapter are mine). The book is structured according to ten cases that the author selected and the writer of the review followed this structure. He, too, starts sentences and paragraphs with references to all or some of the cases, i.e. a topical TSC. The complex beginning *In de eerste casus bijvoorbeeld* (‘In the first case, for instance’) supports this strategy, since its first element fits in the topical TSC, while the second element does not. The order of the complex beginning can therefore be labeled as *TSC-OTHER*.

(16)  
*Uit vijftig ziekteschiedenissen selecteerde zij er tien. In elke casus ligt de nadruk op een bijzonder aspect, zoals..... Overtuigend laat ze zien dat beslissingen een breed draagvlak vragen en daarom altijd collectieve beslissingen dienen te zijn. .....*  

She selected *ten out of fifty cases, For each case* she emphasized a specific aspect, such as......  
She convincingly shows that all decisions need to be supported by a large part of the team and that they therefore always need to be made collectively...
Geruststellend zijn haar bevindingen niet altijd. In de *eerste casus* bijvoorbeeld sterft iemand een langzame verstikkingsdood, …

En in het *titelverhaal* weet de arts die euthanasie gaat verrichten, niet precies welk middel het meest geschikt is en in welke dosering dat moet worden toegediend. [NDC 8-27]

Sometimes her observations are rather disquieting. In the *first case, for instance*, someone slowly dies of choking…

And in the *title story*, the doctor who is going to carry out the euthanasia does not exactly know which medicine is best used and what dosage he should administer. …

The order of Dutch stepwise orientations, too, seems to be driven by the same factors as the order of the stepwise orientations in English. Example (17) puts into perspective the romantic perceptions of what it was like to provide people with a place to hide during World War II. From the second sentence onwards it lists a series of demands that some of the concealed persons had. The sentence starting with the stepwise orientation summarizes this list in one judgment: they wanted too much. This judgment is not the author’s: he quotes the host families as his source (*volgens de gastgezinnen*, ‘according to the host families’). These host families had not been introduced before in the passage, however, and they are therefore in no way part of a textual strategy. *Kortom*, on the other hand, forms the conclusion of an enumeration strategy that was initiated by the first sentence that states that the guests wanted things: *Ze wilden naar buiten* (‘they wanted to go outside’). It makes sense, therefore, that *Kortom* (TSC) precedes *volgens de gastgezinnen* (non-TSC).

(17) Het naoorlogse beeld van de onderduik is vrij vredig. … En de onderduiker was voornamelijk dankbaar. … Niet alle onderduik-situaties beantwoordden aan dat ideaalbeeld. Uit de archieven van de LO blijkt dat een aantal joden ‘onhandelbaar’ werd. Ze wilden…

The post-war image of hiding is rather peaceful. … And the person in hiding was mainly grateful. … Not all arrangements conformed to that ideal image however. From the LO archives it appears that some Jews became ‘unruly’. They wanted to get outside, they wanted better
naar buiten, ze wilden beter
eten, ze wilden minder betalen,
ze wilden minder werken.

Kortom, volgens de
gastgezinnen
wilden ze te veel.

In short, according to the host
families they wanted too
much.

Other examples of stepwise orientations basically follow the same
pattern as illustrated above. This indicates that the internal order of Dutch
complex beginnings is driven by the same contextual principles as the
internal order in English complex beginnings. At least, the examples
discussed above do not provide any counter-evidence. However, since the
number of contexts that allow analysis, especially for complex
orientations, is very limited there is not a lot to go on. A possible source
for more data are sets of examples as presented in (18):

(18)a Echter, in Nederland gaan dingen anders.
However, in The Netherlands things are different.

b In Nederland gaan dingen echter anders.
In The Netherlands are things however different.

“In The Netherlands, however, things are different”.

While the sentence in (18a) represents a complex beginning (a stepwise
orientation), the example in (18b) does not. In this sentence, the rhetorical
adverbial is placed in sentence-medial position, which is the canonical
position for many rhetorical adverbials in Dutch. However, if examples
resembling the order in (18b) occur in the same type of context as
complex orientations do in English then this again may indicate that in
Dutch a similar sensitivity to text-organization principles has a
comparable effect. That examples such as in (18b) are closely related to
complex orientations in English is supported by some examples
This corpus contains original Swedish texts plus the English translations
of these texts and original English texts plus the Swedish translations of
these texts (Aijmer et al. 2001, Altenberg and Aijmer 2000, Aijmer
1996). Swedish is, like Dutch, a strong verb-second language and like
Dutch many rhetorical adverbials are generally placed in sentence-medial
position. The example in (19) is a passage from an original Swedish text.
The English translation is produced by a native speaker of English. Both the Swedish and the English text are clearly organized with the help of a spatial TSC. On two occasions the translator needed to find a position for sentence-medial däremot (‘on the other hand’), and in both cases the result was a complex orientation (In Denmark-Norway, on the other hand and In Denmark, on the other hand) rather than a stepwise orientation (e.g. On the other hand, in Denmark). The complex orientation, of course, supports the spatial TSC that was initiated by I Sverige (‘In Sweden’) whereas a stepwise orientation would not have:

(19) Bönderna inte bara bar upp herrenmännen och statapparaten genom att ge sitt överskott i form av avrad och skatter, de utgjorde också basen i militärsystemet. I Sverige rådde det skindelningsverket, där bönderna inom små områden åtog sig att utrusta en soldat som i fredstid var jordbrukare på ett torp.

The peasants did not only support the landlords and the state apparatus by handing over their surplus in the form of rents and taxes but also formed the basis of the military system. Sweden had its indelningsverket, a conscription system which ensured that the farmsteads within a small area jointly undertook to maintain a soldier who farmed his own croft in peacetime.

In Denmark-Norge var systemet däremot inte enhetligt. Den norska hären försörjdes med soldater enligt ett system mucket likt det Svenska.

In Denmark-Norway, on the other hand, there was no uniform system. The Norwegian army was provided with soldiers according to a system that was very like the Swedish one.

In Danmark-Norge var det däremot godstågarenens uppgift att peka ut någon bonde från sitt gods som skulle stå till förfogande some soldat. På Island fanns inget militärväsende.

In Denmark, on the other hand, it was the duty of the landowner to designate peasants on his estate who would be available as soldiers. Iceland had no military system at all.
In Dutch a similar pattern can be established. The NDC yielded no examples involving representational satellites functioning in a TSC with a rhetorical satellite in sentence-medial position. The following example comes from a text found on the website of the Utrecht University:

(20) Zo vond in het begin van de beeldanalyse het meeste onderzoek plaats op signalen, zoals radar en sonar, door de elektrotechnische gemeenschap. Tegenwoordig is daarentegen medische beeldbewerking het onderwerp van een groot deel van het onderzoek. [source: www.cs.uu.nl/people/arjan/thesis/postamble.pdf ]

When image analysis just became a major topic, most research dealt with signals, such as radar and sonar, and was carried out by the electrotechnical community. Nowadays, however, most of the research is focused on medical image manipulation.

Since this passage is structured according to a temporal TSC, a stepwise construction (Daarentegen is tegenwoordig medische beeldbewerking het onderwerp van een groot deel van het onderzoek ‘However, nowadays most of the research is focused on medical image manipulation’) would have been less appropriate.

In conclusion, Dutch does not employ different text organizational strategies than English does and the relative order of adverbials in complex beginnings, and – more generally speaking, the relative order of elements in the sentence-initial area – seems driven by the same text-strategic principles as in English. That means that at first sight language-specific discourse competence is not likely to explain the deviant production and use of complex beginnings in learner English. In order to investigate the role of general discourse competence, Section 7.7 will compare learner English text strategies and contexts of complex beginnings to native English and Dutch strategies and contexts.

7.7 Discourse organization in learner English
Consider first Table 7.4, which compares learner organization of English texts on the one hand and native English and Dutch organizations of texts on the other (the Dutch and English sentences were earlier reported on in Table 7.3.).
A chi-square test reveals that the texts in the LEC indeed seem to be organized differently than the texts in the NEC and the NDC: the results suggest that the Dutch students resort more frequently to rhetorical strategies than both the English and the Dutch journalists do (again, these suggestions are based on a fairly limited sample and results should be interpreted with caution). It is not unlikely that general discourse competence indeed plays a role in this difference. It may for instance be the case that learners have a limited repertoire of text-organizational strategies to choose from, or that they consistently choose to establish coherence at a local level (with the help of a rhetorical link between the preceding and the current sentence) rather than at a global level. Another possible cause is that the learner essays and newspaper articles cannot in all fairness be compared. Since learner essays do seem to constitute a somewhat hybrid text genre – like newspaper editorials with regard to their choice of topic, but like academic texts with regard to text organization – the rhetorical organization of the first and second year learner essays is also compared to the rhetorical organization of the Academic subcorpus in the NEC. In Table 7.5, below, the same learner English sentence openings that were presented in Table 7.4 are compared to over 200 sentence openings from native English academic texts. However, also when compared to academic texts, the learner English texts seem to contain more sentences with sentence-initial rhetorical elements, while they contain fewer sentences that start with temporal or spatial elements. The tentative conclusion of this investigation are supported by similar results reported by Altenberg and Tapper (1998:89). The found that Swedish students tend to overdo sentence-initial
placement of conjuncts when writing in English, even though their native language does not invite such a strategy. A possible mismatch of corpora is therefore unlikely to explain all differences.

<table>
<thead>
<tr>
<th></th>
<th>Rhetorical</th>
<th>Temporal or spatial</th>
<th>Other</th>
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<tr>
<td>Academic (NEC)</td>
<td>23</td>
<td>21</td>
<td>57</td>
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<tr>
<td>Learner English</td>
<td>25</td>
<td>12</td>
<td>63</td>
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<td>- conjunctions</td>
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<td>Academic (NEC)</td>
<td>14</td>
<td>23</td>
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<td>Learner English</td>
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<td>Chi-square Test:</td>
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Table 7.5: Initial elements in learner English and academic English compared (scores are in percentages)

Working from the hypothesis that Dutch learners organize their English texts differently than both English native speakers and Dutch native speakers do, the second step is to consider the contexts of the learner complex beginnings. Possibly their overuse of stepwise orientations is explained by the fact that learners make more use of rhetorical strategies explains (i.e. they would then simply construct complex beginnings that support the textual strategy of the passage most effectively). Alternatively it may be found that there are contexts in which other types of complex beginnings would have made more sense, but in which the learner nevertheless constructed a stepwise orientation. In other words, this step will test to what extent learners are aware of the discourse-structuring potential that the sentence-initial area offers.

For the examination of stepwise orientations the same method was applied as in Chapter 5. Thus, 15 stepwise orientations were randomly selected from the database and their contexts were systematically
analyzed. The resulting examples could be categorized in three sets: (a) those stepwise orientations that function in a rhetorical strategy that scopes over more than one sentence (TSC-OTHER), as in (21a); (b) those stepwise orientations that set up a local connection between the preceding sentence and the sentence that follows (CHAINING-OTHER or LOCAL-OTHER), as in (21b); and (c) those stepwise orientations that function in passages in which a complex orientation may have been a more adequate choice (OTHER-TSC), as in the passages in (22):

(21) a Still, it would be better if there were restrictions to news reports in wartime. The military device already does its bit by preventing critical information about certain aspects of the war from leaking out. To keep the enemy confused the military censorship sees to it that no information is spread about air offensive, casualties and the moral of the troops. Nevertheless, sometimes information is not withheld but deliberately broadcasted. That way, enemy troops can be tied to certain positions. [LEC 1-6-10] (3 examples in total)

b Organized crime is something the ordinary citizen sees happening all around him. It are especially the Muskovians who are by degrees getting used to see criminals in the streets killing each other of with bombs and automatic guns. For instance, last November there was a bomb outrage on a Muscovian cemetery, whereby 13 people were killed; a link was laid with organized crime. The people killed by the bomb were there mourning around the grave of a slain mafia-leader. The outrage was committed by another mafia-leader, who had already killed the one they were mourning. [LEC 2-147-425] (5 examples in total)

(22) a In the last few months, the KGB has been given more powers than ever before. Under several different names, such as: Tsjeka, GPU and NKVD, the KGB has in the past oppressed and terrorized people on a large scale. At the end of January, 1991, it was given the right to keep tabs on foreign and domestic companies and people, in order to check for economical sabotage. Moreover, top-politicians are also being wire tapped. Just recently security advisers announced, that
the secret police had bugged Boris Yeltsin’s home and office. …

Furthermore, since February 1, the KGB and the Red Army have been going on patrol in the streets. [LEC 1-49-59]

b On the other hand, modern advertisements tend to portray confident women who refuse to accept the taboo and who attempt to break it. For example, in one particular commercial a young girl in a crowded restaurant pours the contents of her cocktail over one of her menstrual towels to show her daddy that the towel is adequately absorbent. [LEC 2-226-569]

In the passage in (22a) a temporal TSC is set up by In the last few months and continued by At the end of January 1991 and just recently. Since February 1 also participates in this TSC, and the textual fit of the complex beginning would have been improved had the writer chosen to produce a complex orientation (Since February 1, furthermore). A similar analysis applies to the complex beginning in the passage in (22b). Seven out of fifteen learner sentences starting with a stepwise orientation may have achieved a better textual fit, had they been introduced by a complex orientation rather than a stepwise orientation. This means that in almost 50% of the cases the stepwise orientation is not the choice that makes most adequate use of the discourse potential of the sentence-initial area. Notice, however, that when a learner does use a complex orientation, as in the passages in (23), then it does exhibit a good textual fit. This may indicate that as soon as the complex orientation as a construction is acquired, so is its efficient use.

(23) a Up to an including the Industrial Age, one especially used violence and money to maintain one’s powerful position. In our century however one can see an important shift in the structure of power. [LEC 1-5-3]

b Originally artificial insemination has been applied to couples of which the man was infertile. Nowadays however there are also many unattached people and homosexual men and women who make an appeal to the sperm bank. [LEC 2-10-163]

With regard to grounded orientations, no statistical tests could be carried out. Learners not only produced too few grounded orientations but
also too few stepwise orientations that are potential grounded orientations. In one of the few stepwise orientations of this kind in the LEC, presented in (24), the subject seems to have rightly chosen to produce a stepwise rather than a grounded example. The passage follows three other paragraphs which started with 'the normal procedure', 'a part of the procedure' and 'another part of the procedure' respectively. The passage in the example then starts with Although the present procedure for minor refugees is far from ideal, and since that element continues the topical TSC, that seems a sensible choice.

(24) Although the present procedure for minor refugees is far from ideal, for now there is no amelioration to be expected. At present most of the children are granted a preliminary residence permit for it is worldwide seen as inhuman to send minor refugees back to their homeland. [LEC 2-13-172]

7.8 The discourse competence hypothesis
Above analyses have shown two things. In the first place there seem to be no differences between Dutch and English with regard to text organizational strategies nor with regard to how complex beginnings support and continue these text organizational strategies. In the second place there do seem to be differences between Dutch learner English produced by student writers and native English produced by expert writers, and between Dutch learner English produced by student writers and native Dutch produced by expert writers. In both comparisons Dutch learners of English are shown to use more rhetorical text organizers and to produce stepwise orientations in situations where, according to analysis of native English and native Dutch produced by expert writers, a complex orientation would have been more appropriate. Furthermore, the underproduction of grounded orientations by Dutch learners of English cannot be satisfactorily explained by influences from Dutch. Most of the Dutch complex beginnings are in fact grounded orientations. These observations yield the hypothesis that differences between the stepwise, complex and grounded orientations in the LEC and in the NEC are the result of differences in generalized discourse competence (rather than a result of differences in language-specific discourse competence). After all, as far as complex beginnings are concerned, Dutch learners of English can rely on their Dutch discourse competence when writing in
English. This will be referred to as the *discourse competence hypothesis* and will be further examined in Chapters 8 and 9, with the help of an exploratory psycholinguistic experiment.

### 7.9 Theories on writing processes

One last issue should be discussed. The writers who produced the texts included in the NEC and the NDC are more experienced than those who produced texts included in the LEC. Several theories on writing processes leave open the possibility that some of the differences between NEC and LEC complex beginnings may have been caused by differences between novice and expert writing processes.

It has been widely recognized that expert writers compose differently than novice writers do (see however Galbraith and Torrance 1999b:4), and that these differences have an impact on the quality of the resulting text. Flower and Hayes, the producers of the first cognitive writing process model (1980, 1981), opt for a fairly mild interpretation of this difference when they argue that novice writers go through the same processes as expert writers do, but that they do so less efficiently. Bereiter and Scardamalia’s writing process model (Bereiter and Scardamalia 1987, Scardamalia and Bereiter 1986, 1987) takes the difference one step further by arguing that expert writers actually employ additional processes on top of those that they share with novice writers.

Both models have their advantages and disadvantages. Unlike Flower and Hayes (see specifically Flower 1994), Bereiter and Scardamalia miss out in the sense that their model focuses on writing itself, and does not include the context of writing (although they do make references to audience, genre, etc. [see Grabe and Kaplan 1996:121]) (see also Pittard 1999, and Kent 1999). However, this context may have a considerable influence on the way in which a person composes a text. To give a few examples, it presumably makes a difference whether a text is produced under great time pressure, whether it is produced in an exam setting, how the writer relates to the intended audience, whether the text is written because the author feels a need to convey its content (communicative purpose) or because she needs to show that she possesses adequate writing skills, etc.

Despite this omission, this discussion will nevertheless focus on Bereiter and Scardamalia’s model. The most important reason for this is that Flower and Hayes’ assumption that all writers share the same writing
process is hard to maintain: it has been shown many times that skilled writers actually perform in ways which suggest that they are doing something different than less-skilled writers (Grabe and Kaplan 1996:126). The shortcomings of Bereiter and Scardamalia's model will be compensated for by discussing it in the context of Grabe and Kaplan's model of writing as communicative language use (1996), which was designed to represent academic language use in general (including reading, listening and speaking) (see Figure 7.6).

Figure 7.6: Model of writing as communicative language use (Grabe and Kaplan 1996:226)
Grabe and Kaplan's model consists of two major components, namely Context and Verbal Working Memory, each of which include in turn a set of subcomponents. Context is made up of Situation and Performance, and Verbal Working Memory includes Internal Goal Setting, Internal Processing Output and Verbal Processing. This last component, furthermore, draws on three other components, namely Language Competence, Knowledge of the World and On-line Processing Assembly. Grabe and Kaplan assume that when a writer starts her task she will begin by activating the Internal Goal Setting component in order to create an internal representation of the task at hand. Part of the initial input for this task representation is provided by the Situation. The writer will, for instance, need to include demands associated with genre, audience and topic in the task representation and she will also need to assess which difficulties she may run into during the task. If she is to write a text under enormous time pressure, for instance, she may need to adjust her internal standards (see for more considerations concerning contextual factors Grabe and Kaplan’s taxonomy of writing [1996:202ff]).

This explanation already implies that in order to generate a representation of the task, the components in the Verbal Processing unit need to be activated as well. The Language Competence component will, for instance, need to collect information regarding genre appropriateness, text organization, etc. The World Knowledge component may be activated in order to make an assessment of what information is relevant and what not, and which of the relevant information can be considered common knowledge and which not. Internal goal setting thus receives input from both the Context and the Verbal Processing component. With this first task representation as a starting point, the writer can begin fulfilling the task: the Verbal Processing unit takes output of both the Language Competence component and of the World Knowledge component and sends this on to the Online Processing Assembly which subsequently presents the information in mentally observable text units. These are then sent to the Internal Processing Output, which continually compares internal text units to the standards and goals set in the Internal Goal Setting component. The Internal Processing Output is also connected to the Textual Output component in the Context and this is where the mentally observable text units become actual bits of discourse in a written text. Grabe and Kaplan do not state whether all mentally observable texts are sent on to the Textual Output, or whether some are terminated after the comparison. Their model is explicit, however, about
the idea that mental texts that have become actual texts are again compared with the representation in the Internal Goal Setting component. This is indicated by the fact that Textual Output is also in constant connection with Internal Goal Setting. However, if the evaluation is negative, i.e. if the internal text units do not match the goals formulated in the internal task representation, this presumably does not automatically mean that the text units are to be changed or discarded. It may also result in changing the internal task representation. The writing task will then continue with this new representation of the goals and standards. This is an important point I will return to when discussing Bereiter and Scardamalia's model.

In this model the quality of a text is dependent on a whole set of factors. The key component in this respect is, of course, Internal Goal Setting, which takes its (initial) information both from the actual situation and the way in which the writer interprets this situation. However, language competence (which in this model also includes discourse competence) is also an important factor here. If the writer, for instance, does not know about structuring a text coherently, the internal task representation cannot contain goals which specify standards in this respect. Differences resulting from this factor are discussed amply in previous sections in this chapter. The quality of a text is also affected by the rigidity and faithfulness with which internal or external output are assessed against the internal goals and whether a negative match generally results in changing goals (either higher or lower standards, or different content) or changing output (i.e. revision of text).

It is exactly at this point where Bereiter and Scardamalia's model becomes relevant. They hypothesize a clear difference in the way novice writers and expert writers deal with comparisons between internal goals and internal/external output and in the way they employ what Grabe and Kaplan refer to as meta-cognitive processing in the verbal processing unit. Below I will discuss Bereiter and Scardamalia's model and, along the way, I will attempt to connect their model to Grabe and Kaplan's. The final two sections of this chapter will then discuss the impact of writing processes on the construction of complex beginnings.

Bereiter and Scardamalia's writing process model has two tiers consisting of two major processes, namely knowledge telling and knowledge transforming. According to the authors of the model, novice writers limit themselves to knowledge-telling, whereas expert writers make use of both knowledge telling and knowledge transformation. For
novice writers the primary task at hand is to create an extended monologue. Their primary goal therefore becomes to tell what they know. In order to retrieve as much information as possible, they will consider the topic of the assignment and ask themselves what they know. They will also consider the genre of the assignment and ask themselves what they know. And they will then read what they have just written and use this to generate additional information. The underlying process is formalized in Figure 7.7.
Like Grabe and Kaplan, Bereiter and Scardamalia assume that a writer starts out with a mental representation of the assignment ('Internal Goal Setting'), although they do not explain which factors provide input for this representation of the task. The search for appropriate content is then activated by topic and genre identifiers and all retrieved information is tested for appropriateness (presumably against the mental representation of the assignment, but the model is not explicit about this). If the information passes the test it is written down, the mental representation of the text is updated and the procedure is repeated until no further information can be retrieved or until the task has been fulfilled. In terms of Grabe and Kaplan's model, this means that the Online Processing Assembly rather straightforwardly represents the retrieved information in language coding and more likely than not the resulting mentally observable text units will pass the comparison with the internal task representations. Writing according to this model does not require a lot of cognitive resources. When only knowledge-telling processes are employed, therefore, the mental representation of the writing assignment generally does not go any further than 'produce so many words on such and such a topic', and typical assignments that can be handled adequately with this process include “write down what happened before you got into this fight”, “write down what happened before your teacher decided to send you out of the class room”, etc.

Notice, however, that this assumption is put into perspective by Schilperoord (1996) and Schilperoord and Sanders (1999), who maintain that expert writers, too, make use of knowledge telling processes when they perform routine writing tasks (see also Galbraith and Torrance 1999b:5). In such situations the mental representation of the task is a bit more sophisticated than 'produce so many words on such and such a topic’ while the processes still do not exceed those that can be handled by the knowledge telling model. According to Schilperoord, an important reason for this is that knowledge that is activated when a routine task is started by an expert writer also includes ready-made, and for that matter fairly detailed, discourse schemata according to which the text should be produced.

When a writing task demands more complex processing, however, as writing for academic purposes generally does, this model will not do. For such tasks generating content is just a first step in the entire writing process. The next step involves analysis of this content, which should lead to assessments of the relative salience of informational units and to
an ordering of the information in a way that best supports the overall purpose of the text. The problem that the writer needs to solve is not only ‘generate enough content’ but ‘present this content in a way that is organized and transparent’. Writers attempting to compose text in this way will find themselves more often confronted with rhetorical problems than writers that only employ knowledge-telling processes. They will, therefore, far more often find themselves in situations in which they have to revise previously produced text, because information needs to be tailored or because at a global level the text needs to be organized in a different way, etc. In other words, the knowledge that is retrieved needs to be transformed rather than just told and it is Bereiter and Scardamalia’s hypothesis that only more experienced and more skilled writers have access to the processes that support this knowledge transformation process, illustrated in Figure 7.8.

Figure 7.8: The knowledge-transforming process
In the knowledge transformation process, the writing task is initially approached as a problem which needs to be analyzed and for which goals need to be set. This then leads to a plan for the resolution of the problem but solving it may lead to a new problem: for instance solving the problem of a lack of content involves generating new content. However, the generation of new content creates the problem of organizing this new content and embedding it logically in already produced text. In terms of Grabe and Kaplan's communicative model this means that the internal task representation is more complex, that the Verbal Processing Unit does more work in order to transform information generated by the World Knowledge and the Language Competence Units before it sends its information on to the Verbal Processing Unit. Furthermore, the comparisons between internal goal setting and internal text output will be more strict and the result will be more revision of produced text, both at a global and at a local level. At the same time, the internal goals will be changed more, since knowledge transformation also sometimes means that the writer surprises herself and will need to adjust her goals to her new - self-created - knowledge. As Grabe and Kaplan put it, “all skilled writers have experienced the phenomenon in which they discover what they really want to say only after they put their initial thoughts on paper, or as they reflect on what they have just written.” (1996:126). Needless to say these transformation processes make a claim on many more cognitive resources than knowledge telling processes and beginning writers may not have these resources at their disposal. Writing a text has often been compared to juggling constraints and the writer has to pay attention to all of them, simultaneously or iteratively (Flower and Hayes 1980). The only way for inexperienced writers to deal successfully with this writing task as a whole seems to be simply ignoring some of these constraints, at least for the time being. Another type of writer that may not have energy left for painstaking knowledge transformation is the L2-writer, who, after all, needs quite a lot of energy already for processes that are automatized in L1-writers, such as word retrieval and sentence building (although Fayol [1999] shows that processes such as lexical access, spelling and handwriting do in fact have some cognitive costs, even for adult experienced writers). It is not surprising therefore that L2-writers, including those that have considerable experience as a writer in their native tongue, are often found to behave like inexperienced L1-writers.
Translated into concrete action, it is likely that experienced writers spend more time on planning, more time on editing and that they make more editing moves than inexperienced writers. Also, it is likely that the experienced writers who produced the texts that were included in the NEC care more about their final products, since they actually felt a need to communicate the contents of their texts, whereas the relatively inexperienced writers whose texts were included in the LEC mainly needed to show they have acquired certain writing skills (Grabe and Kaplan 1996:226ff).

7.10 The writing process hypothesis
Consider again the language competence hypothesis formulated in Section 7.4. It stated that a possible production process that leads to orientational overloads and orientational clashes is the result of exact translations of syntactic components from Dutch to English. Consider also the example in (13), again, repeated in (26) for convenience:

(26)  
step a: building the message
Gisteren heeft een van de patienten op de Eerste Hulp een kamer in elkaar geschopt. (or: Een van de patienten heeft gisteren op de Eerste Hulp een kamer in elkaar geschopt.)  
step b: translation into the same syntactic constituents
Yesterday / wrecked / a patient / in the ER / a room
step c: place the adverbials:
Yesterday, in the ER
step d: form the rest of the sentence and place it after the adverbials:
Yesterday, in the ER a patient wrecked a room.

Remember that in the hypothetical decisions preceding this construction process two alternative options were formulated. The first one was: ‘find positions for the adverbials’. The second one was: ‘change the way in which the information is presented’, or, with the above discussion on writing processes in mind, ‘transform the knowledge’. One option that would work very well in this particular case is for instance compacting the information of one of the adverbials and the subject, as is exemplified in (27), or compacting the information of one of the adverbials and the object, as is exemplified in (27b).
(27) a Yesterday, an ER patient wrecked a room.
   b Yesterday, a patient wrecked an ER room.

It is my hypothesis that, when given the assignment to construct a sentence with this information, novice writers will tend to find a solution in which the two bits of information are presented in two separate syntactic elements (i.e. no compacting is applied), whereas expert writers will transform the information and produce a version in which in some way or another the two bits of adverbial information are compacted in one syntactic element, thereby reducing the number of adverbials that could potentially end up sentence-initially. According to the hypothesis that expert writers behave like novice writers when writing in their L2, they, too, are expected to produce a version of this sentence in which the adverbial information is presented without making use of compacting.

Transformation of knowledge may also play a role in the construction of complex orientations, where a State of Affairs (SoA) needs to be analyzed in order to determine which element should to be singled out in order to fulfill special functions. Stepwise orientations, after all, are best used in situations where the writer wished to make an immediate link to the preceding context. Such links seem most likely when a writer only makes use of knowledge telling processes. Furthermore, transformation of knowledge may play a role in the construction of grounded orientations in which information units are combined into one coherent message. It may well be the case therefore that differences in writing processes play a role in the underproduction of grounded and complex orientations and in the overproduction of stepwise orientations.

Specific questions that are raised with respect to the connection between complex beginnings in general and the writing process are therefore:

- do learners make more or fewer editing moves in the sentence-initial area than native speakers do
- do learners produce more or fewer transformed-knowledge complex beginnings sentences than native speakers do
Again, Chapter 8 will indicate how the experiment proposes to examine these questions.

7.11 Summary
In this chapter three hypotheses were formulated that may help explain the differences encountered between the NEC and the LEC complex beginnings. The language competence hypothesis holds that orientational clashes and overloads and overproduction of stepwise orientations may be the result of the fact that Dutch has other sentence slots available for adverbials than English does. The discourse competence hypothesis holds that overproduction of stepwise orientations and underproduction of complex and grounded orientations are the result of differences in generalized discourse competence: the LEC yielded different complex beginnings than the PEC not because LEC-writers are language learners but because they are less experienced writers. The writing process hypothesis holds that less experienced writers make less use of compacting techniques (i.e. knowledge transformation processes) than expert writers do, and that this differences results in overproduction of orientational clashes, overload and stepwise orientations. All three hypotheses will be examined in an experiment that will be reported on in Chapters 8 and 9.

Notes
1 This use of the term transfer follows Gass and Selinker’s 1983 definition (quoted. in Dechert and Raupach 1989b:x) (see for an overview of other interpretations of the notion transfer Dechert and Raupach 1989b:x-xii).
2 Note however that a recent study by Hannay (2001) shows that in written English, despite it being a subject-oriented language, some 38% of sentences do not start with a subject.
3 According to Hasereyn et al. combinations of a rhetorical adverbial and some other element (subject or other adverbial) in initial position are acceptable, even though these are sometimes considered an anglicism (1997:1394).
4 Note that the steps in this example (and in further examples of this type) are not claimed to reflect psycholinguistic adequacy.
5 Note that the text was written as one paragraph – the lay-out in the example is the result of synchronization of the Swedish and English version.
6 Of course, even in academic writing certain parts of a text will be produced according to plug-and-play schemata, such as a summary of the results in a table, or the introduction that lays out which topics can be expected in which sections of the paper.

7 Students face a task that is in this respect even more complicated. Lea and Street (1986) have shown that while faculty at universities believe that their standards for what constitutes an essay are self-evident and straightforward, at the same time these standards seem in fact discipline-specific. Since the standards are often ‘rooted in implicit conceptions of what constitutes writing’ it is not always easy for students to figure out which set of standards they are supposed to meet.

8 Consider however Galbraith and Torrance (1999), who may be thought to represent one of less-radical branches of what has come to be known as ‘the post-process theory’ (Kent 1999:1). They claim that problem solving models do not capture the central feature of writing processes, but that writing should rather be conceptualized as a “distinctive activity involving cognitive processes specific to text production” (Galbraith and Torrance 1999b:6). Rather than only looking at differences between types of writers, the focus should also be on differences between the various stages in the writing process, according to Galbraith and Torrance (1999b:6). They hold that the relation of actions to the structure of the final text product provides valuable insights in how knowledge telling and knowledge transformation processes are implemented by various types of language users (see also e.g. Schilporeord and Sanders 1999, Van Wijk 1999, Witte and Cherry 1986).
8

Design of an exploratory experiment

8.1 Introduction
Chapter 7 established that differences in *language competence*, in *discourse competence* and *writing processes* between the writers of the texts in the Learner English Corpus (LEC) and the writers of the texts in the Native English Corpus (NEC) are all possible sources for learners’ overuse of stepwise orientations and their underuse of all other types of orientations. This chapter describes an experiment designed to learn more about the influence on the production and use of complex beginnings of each of these factors.

Section 8.2 discusses the general design of the experiment. Section 8.3 then describes the type of subjects that were asked to participate and Section 8.4 introduces the four tasks the subjects were asked to carry out and provides reasons for the specific order in which these tasks are presented. Sections 8.5 through 8.8, finally, will zoom in on each of the four tasks in more detail.

8.2 General design
The design of an experiment that needs to examine the influence on language use of *language competence*, *discourse competence* and *writing processes* and the interaction between on the one hand *language competence* and on the other hand *discourse competence/writing processes* is automatically constrained in various ways. For instance, in order to examine the interaction between these factors it is necessary to find two groups of native English speakers (student writers and professional writers) as well as two groups of native Dutch speakers (again, student writers and professional writers). When designing an experiment it had to be taken into account, therefore, that half of the subjects (English professional writers and English students) most probably would not reside in The Netherlands. At least one other half of the subjects, furthermore – the professional Dutch and professional
English writers – were most probably not going to have a lot of time on their hands. In fact, the results of a preliminary investigation indicated that the professional writers were willing to spend at most 45-60 minutes on an experiment and that they were not prepared to travel. Since it was assumed that it was going to be quite a challenge to gather enough professional writers as subjects, these constraints had to be taken seriously and, therefore, the experiment would have to be designed in such a way that subjects would be able to carry out the tasks from their own home or place of work and that going through the tasks would not take too much time.

The time restriction, of course, limits the number of items the subjects can be presented with. The most obvious result of this restriction is that statistical tests will have to take the individual items as a starting point, rather than the subjects or subject groups, simply because there are not enough items to be able to state that ‘a subject in general shows a preference for complex orientations instead of stepwise orientations, when given the choice’. At most, the set of items can be treated as a multiple case study and allows conclusions such as ‘a group of subjects shows for this item a preference for a complex orientation instead of a stepwise orientation.’

The design of the experiment is influenced in yet other ways by all factors that are hypothesized to have an impact on the construction of complex beginnings (i.e. language competence and discourse competence/writing processes). As was established in Chapter 7, the questions related to these sources make it necessary to gain insight into the construction processes of complex beginnings. They therefore require an experiment that not only collects data on the final results of each task but also on the processes that lead to those results. There are several means to achieve this. A first one is to present people with a paper-and-pencil test and then conduct a follow-up interview. The advantage of this method is that, to the extent that people can reconstruct their decisions, the choices that are made during the construction process may be supplemented with underlying reasoning. The disadvantages are that it is not very efficient (the subject will need to spend time both on the experiment and on the interview) and that it requires face-to-face sessions with the investigator. Another method is to collect verbal protocols of writing sessions (Hayes and Flower 1983, Newell and Simon 1972). The advantage here is that it is less time-consuming for the subject than the first method. The disadvantages are that analysis of these protocols is
very intensive and, again, that face-to-face sessions are required. A last possibility, and the one opted for in this study, is to implement the tasks in a computer program and have the software trace the construction process for each item. If the software is designed well, this method does not require face-to-face sessions and, importantly, part of the analysis process can be automatized. A disadvantage, however, is that in contrast to the first two methods this analysis is limited to observations. The files detailing the construction process may well reveal that a certain adverbial is moved from sentence-final to sentence-initial position or that information that was initially presented separately in an adverbial phrase and a noun phrase is compacted into just the noun phrase (i.e. \textit{In the ER, a patient} becomes \textit{An ER patient}), but why the subject chose to make such a move can only be guessed at. A further disadvantage is that implementing the task in this way investigates one particular kind of writing, namely only writing using a computer.

For the purposes of this experiment a website was developed from which the experiment-software could be downloaded. Since subjects had to be able to install and run the software without live explanations, the instructional texts were carefully edited and presented in the native language of the subject. This required a Dutch as well as an English version of the software. The website provided a step-by-step instruction on how to download and install the necessary files, how to execute the software and how to enter username and password (these were handed out to each recruited subject along with the URL of the website). When required, additional technical support was given by email or telephone. Notice that protection of the software by means of username and passwords was necessary since the software could be downloaded by any accidental visitor to the website. Since the data was automatically collected, there was no other way than password protection to ascertain that data was in fact produced by subjects who fit the profile.

Each of the tasks the subjects were presented with was explained in two steps. In the introductory window of a task the subjects could find a general description of the activities that had to be carried out. The writing task, for instance, was introduced with the following text:

(1) This writing tasks consists of two parts. In the first part you will be asked to construct two short texts. In the second part you will be presented with three short texts, in each of which the final sentence is missing. Please compose these sentences.
After clicking on the Start Button, the subject was presented with an animated instruction explaining the interface of each task. This animation could be manipulated by pressing ‘Next Page’ and ‘Previous Page’ buttons.

The interface for each of the tasks was designed with the help of the methodology developed in the field of human-computer interaction (Baecker et al. 1995, Hix and Hartson 1993, Mayhew 1992, OU et al. 2000). For all tasks several graphic user interfaces (GUIs) were tested, on different platforms and with people with a varying degree of computer skills (self-assessed). It was established that the minimum requirements for the subjects were that they knew how to use a mouse, how to manipulate drop-down menus, how to enter text in a text field, and that they were reasonably skilled typists. The interface was designed in such a way that subjects could only carry out the tasks in the intended order, that they could not skip items when these were not yet completed, and that they could not return to items that had been completed already. In order to be sure that all subjects could run the experiment on their own platform, it was designed for a 640 by 480 screen resolution (i.e. a 14-inch screen). The software did run on screens with a higher resolution but it cautioned the participants that the design of the window might look slightly out of balance as a result of the fact that it was developed for a smaller screen size. At that point subjects were offered the opportunity to continue anyway or to end the session, change the resolution of their screen and re-start. Finally, a safety-net was built in to deal with inadvertent terminations of the software: a log kept track of the user's progress and, when executed, the software always first initiated a routine that checked this log to determine whether it was the first time this subject executed the experiment and if not, at which item the current session should continue.

After all tasks were carried out, the result files were collected and an automatic internet connection was established. The data were then mailed to an email address at the University of Amsterdam. The producer of the data could be identified by the username that labeled each result file and, if requested, the subject received a book token in return for his or her efforts. Subjects knew that their results were collected but not that the software also tracked the processes that led to these results. They were, furthermore, informed that this was a study investigating writing
strategies of native and non-native speakers, but the specific interest in adverbial combinations in initial position was not revealed.

8.3 The subjects
As pointed out before, the writers of the NEC texts differed on at least three counts from the writers of the LEC texts. The NEC texts are produced by native speakers who are professional writers (reporters, scholars, novelists). They presumably have a high language competence and a high general discourse competence and they are expert writers. The texts in the LEC on the other hand, are produced by Dutch students of English, who are non-native speakers and – especially when compared to the professionals who produced the NEC-texts – who are novice writers. They have a lower language competence, a lower general discourse competence and less writing experience. Analyses in Chapter 7 established that it was necessary to compare English complex beginnings produced by groups of subjects in which on the one hand language competence and on the other hand discourse competence and writing experience are systematically varied. In other words, it is necessary to collect data on complex beginnings produced by subjects who are (I) native speakers and experienced writers with a high general discourse competence, (II) non-native speakers and experienced writers with a high discourse competence, (III) native speakers and novice writers with a, comparably, lower level of general discourse competence, and (IV) non-native speakers and novice writers with a lower level of general discourse competence.

Subjects selected for group I were to be native English reporters, scholars and novelists, who publish regularly in English. They will be referred to as English Natives and Expert writers or ENE. Subjects selected for group II were to be native Dutch reporters, scholars and novelists, who publish regularly in Dutch, and they will be referred to as Dutch Natives and Expert writers or DNE. Subjects selected for group III are native English who are in their first or second year at university (18-22 years old) and who are language students. They will be referred to as English Natives and Novice writers or ENN. Finally, subjects selected for group IV are first and second year Dutch students of English (also 18-22 years old). Subjects in this group will be referred to as Dutch Natives and Novice writers or DNN. Table 8.1 gives an overview.
Table 8.1: Subject types in experiment

<table>
<thead>
<tr>
<th>discourse competence and writing experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>higher</td>
</tr>
<tr>
<td>language competence</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

For the DNN-group selection is limited to first and second year students, since it was only in those years that the corpus analyses revealed significant differences between learner and native English use of complex beginnings. Since Chapter 6 established no significant differences between first and second year texts, for the purposes of this experiment first and second year students are taken as constituting one group. For the ENN-group, selection is limited to language students, in order to avoid a difference in language talents between ENN and DNN students. After all, Dutch students who set out to study English are generally good language learners.

8.4 The tasks: type and order

When designing tasks intended to elicit spontaneous information on construction and use of complex beginnings in writing one runs into a classical problem. Only if subjects are presented with an open-ended writing task in a situation that emulates the natural writing process as closely as possible can the data be considered to reflect more or less natural behavior. However, only when tasks are more focused than such open writing assignments can a researcher be certain that an experiment will indeed yield data on a particular construction. There being no solution readily available, in this experiment subjects were presented with a series of tasks, ranging from relatively open-ended in the first assignment (and therefore, more closely reflecting what is going on during a normal writing process) to relatively closed tasks in the last assignment (and therefore, with a greater certainty yielding data on complex beginnings).
The most open-ended tasks consist of a writing task, in which subjects had to write a short text based on a list of given information or in which they had to supply the final sentence of a given text. The next task, an Unscrambling Task, was more closed in the sense that users had to build sentences with given sentence elements (in other words, they could not decide themselves anymore how they wanted to encode the information). While the set of elements that had to be unscrambled contained quite a few adverbials that might be placed sentence-initially, this task did not yet explicitly focus on complex beginnings. The third, and for native English speakers final, task did focus on complex beginnings: subjects had to judge the acceptability of various sentences with complex beginnings, and also decide on the textual fit of these sentences in a given context. The final task for DNE and DNN-subjects was a cloze text. In order to ensure that the language proficiency of the DNE and DNN group was indeed comparable, these two groups were presented with a newspaper article from which each eleventh word was deleted and they were asked to provide the missing words.

8.5 The Writing Task
The writing task consisted of two parts. In the first half of the task, subjects were asked to write a short text of no more than four sentences in which they had to convey information that was given to them in the form of a short list. The information was set up in such a way that encoding it in a text may yield a complex beginning. In the first item, for instance, a contrast between two periods of time was built in, possibly resulting in a *Time, however* or *However, time*- complex beginning. It was also indicated what type of text should be written (i.e. newspaper, essay, academic, etc.). The two items were based on authentic texts from the NEC, but the information the subjects were provided with was modified. The subjects had five minutes for each item. Figure 8.2 gives an example of the Graphic User Interface of the writing items (at the moment of the screen shot, the subject is in the process of typing her first sentence). The answer area in which subjects could type their text allowed all editing moves that can be used in text processors (delete, copy, paste, moving around with arrows). Subject could click on Clear when they wanted to start with a clean slate and on Done when they were finished writing their text. They could not modify the contents of the instruction and
information area. The timer at the top of the screen informed them about the amount of time they had left to complete this item.

The first item contained the information as given in (2a) and was based on the (modified) passage in (2b).

(2) a Using all the information below, write at most four sentences on Henrietta Lacks. The sentences should serve as the introduction to a newspaper article discussing cloning. NOTE: The use of 'but' should be avoided.
   - Henrietta Lacks was born in Baltimore.
   - she was born in 1920.
   - she died when she was 31.
   - she did not draw a lot of attention to herself during her life.
   - she achieved a curious form of immortality after her death.

   Henrikette Lacks was born in Baltimore, she was born in 1920, she died when she was 31, she did not draw a lot of attention to herself during her life, she achieved a curious form of immortality after her death.
- her cells were the first to live on in thousands of test tubes around the world.

b Henrietta Lacks was born in Baltimore in 1920 and in 1951, only 31 years old, she died of cancer. It was the end of an inconspicuous life. During this life she did not draw a lot of attention to herself. After her death, however, she achieved a curious form of immortality: her cells were the first to live on in thousands of test tubes around the world.

As indicated, the original passage is structured according to a temporal Text-Strategic Continuity (TSC), and accordingly, one of the sentences starts with a complex orientation (After her death, however) rather than a stepwise orientation (However, after her death). Specific questions that are of interest for this item are:

a Do subjects set up a temporal TSC in this text (and do certain types of subjects do so more than others)?
b If they do set up a temporal TSC do they then create a complex beginning, and if they create a complex beginning is this a stepwise orientation, a complex orientation, or yet another type (and are there differences between the groups)?
c If they create a complex beginning, in which way do they construct this complex beginning? (for instance, do they start placing the rhetorical adverbial and does the temporal adverbial then follow, or is the rhetorical adverbial the one that is placed last?)
d How many editing moves relate to the adverbials?
e How many editing moves relate to the sentence-initial area?

In order to avoid manipulation of the subjects with regard to questions (a) and (b), the temporal adverbials during her life and after her death – which may set up a TSC and which may, as a result, drive the production of a complex orientation (for example, After her death, however) – were placed sentence-finally in the information list.
The second item contained the information as given in example (3a) and was based on the passage in (3b).

(3) a Using all the information below, write at most four sentences relating the following event which serves as an example of patients misbehaving in a hospital. The story is part of a doctor's call for new values.
- a patient had taken XTC.
- this took place last week.
- this took place in the E.R.
- she had a bad trip.
- she wrecked a room.
- she spat at everyone who came near.
- I suggested she'd be prosecuted for the costs.
- my colleagues considered that heartless.
- they felt you don't prosecute when it is clear one cannot be held responsible for one's actions.

b Last week in the ER a patient had taken ecstasy and, having wrecked a room in the hospital, spat copiously at anyone who came near her. My suggestion that the patient be prosecuted, and that the cost of refurbishing the room she wrecked be recovered from her, was greeted with disbelief, as if I were Genghis Khan. How could I contemplate being so nasty to someone who was clearly not responsible for her actions?

As indicated in the original passage, the first sentence in the original passage starts with a composite orientation: Last week in the ER. Other ways that subjects may choose to encode the spatial and temporal information are: (1) transformation of the information by compacting the spatial information in the Subject NP (as in an ER patient or a patient in the ER); (2) distribution of the spatial and temporal information across the sentence (as in In the ER a patient had taken XTC last week); and (3) production of an orientational clash (as in Last week, in the ER a patient ...or In the ER, last week a patient ...). Specific questions that are of interest for this item are, therefore:
Design of an exploratory experiment

a. How do subjects deal with the adverbial information (composite, clash, compacting, distribution)?

b. How many editing moves relate to the spatial and temporal information?

c. How many editing moves relate the sentence initial area.

The result files for this task not only provide information on the type of complex beginning (if any was produced) and TSC in each text, they also provide information on the construction process of each of these texts. Every 5 seconds (on some platforms this mysteriously became every 3 seconds) the text in the answer area is collected, receives a time stamp and is subsequently stored. As soon as the time is up or as soon as the subject clicks on 'Done', the final results are collected as well and labeled accordingly. These final results, too, receive a time stamp. A sample of a result file is in (4).

(4) results writing assignment part I: dne21

ITEM NO.1

time = 5:00;
time = 4:55;
time = 4:50;
time = 4:45;
time = 4:41;
time = 4:35;
time = 4:31;
time = 4:25;
H; time = 4:20;
In 192; time = 4:16;
In 1920 ; time = 4:10;
In 1920 ; time = 4:05;
In 192; time = 4:00;
Henrietta Lacks; time = 3:55;
Henrietta Lacks; time = 3:50;
Henrietta Lacks; time = 3:46;
Henrietta Lacks was born ; time = 3:40;
Henrietta Lacks was born in 1920 in ; time = 3:35;
Henrietta Lacks was born in 1920 in Baltimore; time = 3:30;
Henrietta Lacks was born in 1920 in Baltimore; time = 3:25;
Henrietta Lacks was born in 1920 in Baltimore. She died of cance; time = 3:20;
Henrietta Lacks was born in 1920 in Baltimore. She died of cancer on the age of 31; time = 3:16;
Henrietta Lacks was born in 1920 in Baltimore. She died of cancer on the age of 31; time = 3:10;
Henrietta Lacks was born in 1920 in Baltimore. She did not draw adied of cancer on the age of 31; time = 3:05;
Henrietta Lacks was born in 1920 in Baltimore. She did not draw a lot of attention to herself during died of cancer on the age of 31; time = 3:00;
Henrietta Lacks was born in 1920 in Baltimore. She did not draw a lot of attention to herself during her lifte, but that died of cancer on the age of 31; time = 2:55;
[etc.]

In the second Writing Task, subjects were asked to write the final sentence of a paragraph. Again the items were based on original passages. The information that had to be conveyed in this sentence was given and subjects could choose to encode some of this information in the form of a complex beginning. If they chose to do so, this complex beginning might or might not support the TSC initiated in the preceding text.

The items in the task are given in (5)-(7) below. Note that the item in (7) is based on a learner example and that the main object of interest was not so much the order of the adverbials but whether or not subjects would re-create the orientational clash in the original. For the other two items the TSC that may drive the underlying order in the complex beginning is indicated. The example in (6) is ambiguous in this respect, however. The writer of the original passage considered In some rather arid regions as the element initiating a spatial TSC, and continued this TSC with the complex orientation In Northwest Australia, however. However, in hindsight, an equally valid move might have been to select only the word some from In some rather arid regions as the initiator of a TSC and then continue the strategy by using for example. This yields the stepwise orientation For example, in Northwest Australia. When reporting the results on this item, in Chapter 9, this ambiguity will be taken into account.

(5) a In the summer of 1988, Ed and Carole White were looking for a house in Cambridge. In July of the same year, they put down a deposit and they moved house in October, having paid 76,000 pounds in total. Five years later, the Whites, who by that time had
two children, would have liked to move to a bigger place. There was one problem, however. <<They would have gotten only 55,000 pounds for it. This was if they were really lucky. This was in 1993.>>

b In 1993, if they were really lucky, they would have gotten only 55,000 pounds for it [NEC 358-140] (stepwise orientation)

(6) a Terrible as hurricanes and typhoons are, not all the consequences of these weather extremes are negative. In some rather arid regions the contribution of tropical cyclones to rainfall is crucial. <<20 to 50 percent of the annual rainfall is associated with tropical cyclones. This is an example. This is in Northwest Australia.>>

b In Northwest Australia, for example, 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [NEC 90-10] (complex orientation)

(7) a In a true democracy there is freedom of speech, which enables every citizen to utter his or her dissatisfaction with governmental decisions. Literally every person has the right to go into politics and have some influence on the way he or she is governed. <<The situation was very different. This was in Russia. This was until recently.>>

b Until Recently, in Russia the situation was very different. [LEC 1-1-4] (orientational clash)

The questions that are of interest for these three items are similar to the questions asked for the first two writing items. For all three items the result files will be analyzed for type of sentence opening, construction process and editing moves.

8.6 The Unscrambling Task
The Unscrambling Task was set up to attempt to isolate the influence of context. In the first half of this task, subjects were asked to unscramble a sentence without context. This should give insight into any ‘default’ orders that subjects may apply. In the second half of this task, the subject’s own unscrambled results were presented again to him or her, but this time in their original context. At this point subjects were asked whether or not they would like to change their sentence in order to make it fit the context. Unfortunately, however, the data for this second part of
the task could not be analyzed. Too many subjects clicked the items away in less than 2 seconds. In such a short time they cannot possibly have read the entire passage the sentence was lifted from and then also assess how well their own sentences fit in this context. In Chapter 9 discussion will therefore be limited to part I of this task.

The list of sentence elements that had to be unscrambled contained quite a few adverbials which had to be given a position in the resulting sentence, but other than that, there was no focus on complex beginnings in this task. In the first half of the task, the unscrambling part, the subjects had two minutes for each item. They could click on Clear when they wanted to start with a clean slate and on Done when they had placed all the elements. The Done button was, however, not active unless all sentence elements were placed. Item 1 in this task is illustrated in Figure 8.4.

![Unscrambling Task I:1](image-url)
The items are in (8)-(15) below:

(8) a 18 million pounds / according to the latest business plan / be / in five years / the company / turning over / should
   b In five years, according to the latest business plan, the company should be turning over 18 million pounds. [NEC 104-276]

(9) a to the southern cotton fields / travelled / in America / later / she / lending support to striking farmers / during the 1930s
   b Later, during the 1930s in America, she travelled to the southern cottonfields lending support to striking farmers [NEC 1-3]

(10) a was / by examining his brain / for example / when Lenin died / called upon / to find the secret of his genius / a pathologist
    b When Lenin died, for example, a pathologist was called upon to find the secret of his genius by examining his brain [NEC 112-317]

(11) a it / when I was a small boy living near York / near my home / was / back in the 30s / possible to catch wild-bred trout
    b When I was a small boy living near York, back in the 30s, it was possible to catch wild-bred trout near my home [NEC 53-186]

(12) a for a business meeting / it / necessary / less often / therefore / be / will / in the future / to travel to a remote city
    b Therefore, in the future it will be less often necessary to travel to a remote city for a business meeting. [LEC 1-109-136]

(13) a there / because of the drop in the birth rate in the 70s / in Britain / were / in 1993 / one fifth less young people / than in 1987
    b In 1993, because of the drop in the birth rate in the 70s, there were one fifth less young people in Britain than in 1987. [NEC 110-312]

(14) a the global temperature / to increase / moreover / by the year 2100 / because populations are growing / is expected / by 2.0 degrees
    b Moreover, because populations are growing, the global temperature is expected to increase by 2.0 degrees by the year 2100. [NEC 10-78]

(15) a the move / obediently / again / Wang Xian / unquestioningly / does
    b Obediently, unquestioningly, Wang Xian does the move again. [NEC 61-207]
The items in (8), (10), (12), and (14) potentially yield either a complex orientation or a stepwise orientation. The item in (9) may yield a composite orientation, an orientational clash, or a combination between a grounded and a composite orientation (as is the case in the original). The items in (13) and also (14) potentially yield either a grounded or a stepwise orientation. Items (11) and (15) are somewhat of a problem. To start with item (11), in an earlier phase of this research, *When I was a small boy living near York, back in the 1930s* was classified as a grounded orientation. The reversed alternative, *Back in the thirties, when I was a small boy living near York*, was on the other hand classified as a complex orientation. This item was inserted, therefore, to investigate the alternation between complex and grounded orientations. However, after the experiment was launched, new insights caused both alternatives to be classified as grounded orientations, and rendered this item more or less useless. Item (15) is complicated for another reason: it was inserted to test construction of compound orientations, but due to the ambiguous nature of *unquestioningly*, which can be easily interpreted as a propositional adverbial rather than a predicate adverbial on a par with *obediently*, this sentence caused a lot of confusion. This may have been increased by people’s unwillingness to juxtapose two –ly words. As a result, this item was not a very happy choice either. Both items were dropped from the rest of the research.

Again, the way the data were collected allowed an insight into the construction process of the sentences. Every time an element was placed, this move was stamped for time and stored. As a result it was possible to reconstruct the order in which a subject constructed her sentence. A sample of a result file is given in (16)

(16) results unscramble assignment part I: dne21

ITEM NO.5
1 (It) - It; time = 1:26;
2 (will) - It will; time = 1:24;
3 (be) - It will be; time = 1:23;
4 (necessary) - It will be necessary; time = 1:22;
5 (therefore) - It therefore will be necessary; time = 1:06;
6 (it) - Therefore it will be necessary; time = 1:03;
7 (in the future) - Therefore in the future it will be necessary; time = 1:00;
8 (to travel to a remote city) - Therefore in the future it will be necessary to travel to a remote city; time = 0:53;
9 (for a business meeting) - Therefore in the future it will be necessary to travel to a remote city for a business meeting; time = 0:51;
10 (less often) - Therefore in the future it will less often be necessary to travel to a remote city for a business meeting; time = 0:38;
11 (less often) - Therefore in the future it will be necessary less often to travel to a remote city for a business meeting; time = 0:26;
12 (.) - Therefore in the future it will be necessary less often to travel to a remote city for a business meeting.; time = 0:18;

FINAL ANSWER:
Therefore in the future it will be necessary less often to travel to a remote city for a business meeting.; time = 0:14;

The element in between brackets is the one that is positioned in the sentence-under-construction. Elements in moves (1), (2), (3), (4), (7), (8), (9), (10) are placed for the first time. The elements in moves (5), (6) and (11) were placed previously but are re-positioned. In move (12) punctuation is inserted.

8.7 The judgment task
The judgment task is the task that focused most directly on complex beginnings. Subjects were presented with three alternative word orders of one and the same sentence and were asked to indicate for all three alternatives whether they think it is acceptable, doubtful or unacceptable. After making this judgment, the original context of the sentences was produced and the subject was asked to indicate the degree of textual fit on a scale from one to three for those sentences that were considered either doubtful or acceptable. When two sentences fit equally well, according to a subject, she could give them the same rank. In the task, the next sentence only became visible after the previous sentence has been judged. The log tracked whether a subject changed her earlier judgment and whether she did so after seeing the second sentence or the third sentence. Subjects had three minutes for each item (including judgment and ranking) and there were four items in total. The judgment items are given
in (17)-(20). The contexts in which the sentences were presented later are in every d-sentence.

(17) a  As every doctor knows and recognizes of course the brain is the seat of thought.
      b  Of course, as every doctor knows and recognizes, the brain is the seat of thought.
      c  As every doctor knows and recognizes, the brain is, of course, the seat of thought.
      d  The view of crime as illness implies that it is individuals who need treatment, rather than society which needs reformation. However, if such a view becomes the orthodoxy, it will also not be long before burglars and other will demand to be excused on the grounds of having the wrong balance of chemicals in their brain. As every doctor know and recognizes, of course, the brain is the seat of thought. No one blames, therefore, people with Alzheimer’s disease for their lack of powers of concentration. The pathological process in their brain is not only an explanation, but a complete excuse. However, if this argument is taken to its logical conclusion – it utterly destroys the idea of personal responsibility.

(18) a  In the United States, by the early sixties TV had been hijacked by its sponsors and turned into another advertising medium.
      b  By the early Sixties, TV in the United States had been hijacked by its sponsored and turned into another advertising medium.
      c  In the United States by the early Sixties, TV had been hijacked by its sponsors and turned into another advertising medium.
      d  Perhaps the real benchmark of British liberalism is television, the mirror to any society. In the United States, by the early sixties TV had been hijacked by its sponsors and turned into another advertising medium. America is the superpower which sends rockets into space more smoothly than other countries can run a bus service, yet is incapable of producing watchable, intelligent television. The enduring quality of British television says more about traditional British values than anything else.
(19) a Of the nine situation that were presented, in three situations people would consider not using their car.
b Of the nine situations that were presented, in three situations people would consider not using their car.
c In three out of the nine situations that were presented, people would consider not using their car.
d Recently a marketing institute conducted an investigation regarding situation in which people would forget about their car and go to work by public transportation. Of the nine situations that were presented, in three situations people would consider not using their car. The situation that people most indicated as stopping them from going by car was the one in which it was pretty likely that the car would break down before the first turn was reached. The message is clear. In order to decrease the number of car movements, all cars should be sabotaged by a special team, to be set up by the government.

(20) a However, by the early 1970s, this attitude was changing.
b By the early 1970s, however, this attitude was changing.
c This attitude was, however, changing by the early 1970s.
d For years police corruption simply did not exist in the public’s mind. Policemen were brave, upstanding and trustworthy. No one would ever doubt the word of an officer. By the early 1970s, however, this attitude was changing. At that time, Sir Robert Mark, who took over as Metropolitan Police Commissioner, promised to do away with corruption within the force. His philosophy seemed to be: ‘A good police force is one that catches more criminals than it employs.’

For the items in (17) and (20), the focus is on the contextual part of this assignment. According to the analysis of these items in Chapter 5, the (b)-alternative in both passages provides the best fit. For the items in (18) and (19) the focus is on the judgment of the sentences themselves and the question is whether or not subjects recognize the orientational clashes as less acceptable. Unfortunately, due to an oversight, the first few subjects who took the experiment were confronted with an unedited version of the
third item. For this item, the data of these subjects had to be classified as missing data

8.8 The cloze test
According to Section 8.3, the subject groups DNN and DNE should differ from each other with regard to the variable ‘general discourse competence’ (DNE are professional writers, whereas DNN are novice writers), but they are assumed to have a similar level of ‘language proficiency’. There is, however, no external measurement available – such as number of years of formal training in English – to test this last requirement, since both groups come from such different backgrounds. It was therefore necessary to administer a test to these subjects to establish whether similar levels of language proficiency can indeed be assumed. Since it has been shown that scores on Cloze tests can adequately distinguish between native speakers and non-native speakers, and between advanced non-native speakers and beginning or intermediate non-native speakers (see Bachman 1985 for an overview of studies; see also Sciarone and Schoorl 1989), such a test is a suitable candidate for the validation of the similar-language-proficiency requirement.

However, while cloze tests are often celebrated as easily created and efficient tests (Jonz 1990:72), they are also heavily criticized for being erratic, unreliable and limited in the sense that they are said to test only lower-order linguistic abilities (see Jonz 1990:61ff for an overview of studies criticizing cloze tests). Since that time, however, several studies have refuted these criticisms. To start with the last objection, Jonz (1990) and Bachman (1985) cite a number of studies that have demonstrated that cloze tests measure higher-order linguistic abilities as well as lower-order linguistic abilities (see also Abraham and Chapelle 1992). For some items closure can be achieved by evaluating information in the immediate context of the blank (i.e. lower-order linguistic abilities), while other items require consideration of information that needs to be retrieved from a wider context (beyond the clause, but within the sentence; beyond the sentence, but within the text; beyond the text, i.e. higher-order linguistic abilities). A prerequisite for this is, however, that the texts used to create the cloze tests are not abridged, thereby distorting the textual hierarchies that learners may depend on when reconstructing cloze items that depend on reconstruction of larger stretches of discourse (Bachman 1985:537).
Therefore, the cloze text selected for this experiment was presented in full.

With regard to cloze tests being erratic, Jonz (1990) demonstrated that the items in a set of seven fixed-ratio cloze tests (i.e. deletion of every \( n \)th word) measured the same linguistic abilities in the same frequency from text to text. According to Jonz (1990:60), it can therefore be assumed that cloze test results can be generalized and do not need to be interpreted from text to text. Abraham and Chapelle put this result into perspective when they demonstrated that the content of the text indeed does not seem to make a difference, but that the difficulty of the text does need to be tailored to the level of the students (Abraham and Chapelle 1992). In a way this consideration is irrelevant for this experiment, since this cloze test is not set up to measure an absolute level of language proficiency. All that is needed is a relative level and the relative levels of two groups (which deal with the same text) need to be comparable. Just to be on the safe side, however, the degree of difficulty of the text selected for the cloze test was similar to the degree of difficulty of the other texts the subjects were confronted with during the experiment (i.e. similar text type, similar type of topic and similar source). This choice is in keeping with the general consensus on this matter, which seems to be that texts on which cloze tests are based ought to be authentic and nonliterary, and the subject matter should be familiar to the population (Sciarone and Schoorl 1989:422).

Finally, with regard to cloze tests being unreliable, Sciarone and Schoorl (1989:415) demonstrated that the number of items necessary to construct a reliable cloze test (i.e. cloze tests that are independent of starting point of the deletion) depends on the scoring method. They administered two versions of a 200-item cloze test to two groups of 38 and 36 Indonesian learners of Dutch. Analysis of their scores on various subsets of 100, 75 and 50 items revealed that, in order to carry out a reliable test, the required minimum number of items for the exact-word scoring method is 100. When the acceptable-word scoring method is used, 75 items is sufficient. However, it is obvious that administering a 100-item test to subjects who have already carried out three complex-beginnings-tasks and who do not want to spend more than one hour on this experiment is problematic. The solution that was found was to use the acceptable-word scoring method, create a cloze test with 100 items and set a time limit. The assumption was that the more items a subject
managed to bring to a closure within this limited time, the higher her language proficiency was.

The text that was used for this cloze text is titled ‘Save this threatened species’ and deals with how the police pays criminals in order to obtain information. It is taken from The Independent, one of the newspapers from which texts for the NEC News subcorpus were selected. The deletion rate was set at 11 and, in accordance with the above demands, in total 100 items were removed. The subjects had 20 minutes to bring as many items as they could manage to a closure. The title, the introduction – the part that is in bold face in the printed version of the newspaper – and the first paragraph were given in full. From the second paragraph onwards words were deleted. The complete text including the exact answers and the acceptable answers can be found in Appendix A.

Notes

1 I am greatly indebted to Emile van Raaij, who wrote the code that was responsible for connecting to the internet, and subsequently collecting and mailing the data. I would also like to thank Henk Schotel, who helped me try to produce a MacIntosh version of the software. Unfortunately, lack of time forced us to abort this attempt.
9

Results of the experiment

9.1 Introduction
This chapter will present relevant results of the experiment described in Chapter 8. Section 9.2 will start out with a report on the number and type of subjects in each of the four subject groups and, with the help of the results on the cloze test, it will also establish whether or not the two non-native groups are comparable with regard to the parameter *English language competence*. Section 9.3 will then focus on some native speaker results (expert writers) in an attempt to validate the hypothesis presented in Chapter 5, namely that the internal order in complex beginnings is context-driven. For brevity’s sake, this discussion will be limited to stepwise/complex orientations that include a rhetorical or propositional adverb phrase. In Sections 9.4 and 9.5, hypotheses that resulted from the contrastive corpus analysis of the Native English Corpus (NEC) and the Learner English Corpus (LEC) will be tested (see Chapter 6) and an attempt will be made to discover which parameters may have caused the NEC-writers to produce different types of complex beginning in different contexts than LEC-writers did. The parameters that will be focused on are *language competence, generalized discourse competence/writing experience* and *language-specific discourse competence*. Section 9.4 will discuss the alternation between stepwise orientations and complex orientations, and Section 9.5 will investigate production and evaluation of composite orientations and orientational clashes. Section 9.6 will summarize and interpret. Throughout this report on the results of the experiment it should be kept in mind that all items are mini-case studies: the specific nature of each of the items may have skewed some of the outcomes, and results should therefore always be interpreted with a degree of caution.
9.2 The subjects

9.2.1 Number of subjects
Table 9.1 shows the number of subjects per subject group (in this table ENE stands for English Native speakers who are Expert writers, ENN stands for English Native speakers who are Novice writers, DNE for Dutch Native speakers who are Expert writers, and DNN, finally, stands for Dutch Native speakers who are Novice writers). Remember that the experimenting software was not platform-independent and while it did run on Windows platforms, it did not run on MacIntosh and other platforms. Consequently, some 14% of the subjects (30 out of 216) had to participate via an email-version of the experiment. For these subjects, no process data could be collected (see Chapter 8) and their return files contain information on final results only (results only in Table 9.1). For the other subjects, information on final results as well as on the processes that led to these results is available (see process and results in Table 9.1).

<table>
<thead>
<tr>
<th>Native speakers of English</th>
<th>Dutch learners of English</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>process and results</td>
</tr>
<tr>
<td>expert writers</td>
<td>45</td>
</tr>
<tr>
<td>novice writers</td>
<td>36</td>
</tr>
</tbody>
</table>

Table 9.1: Subjects

Note furthermore that contrary to expectations, it proved harder to find student writers (DNN and ENN) than it did to find expert writers (ENE and DNE) and when they had agreed to participate, student writers needed more prompting before they actually carried out the test. In the end, two series of Dutch students and one series of English students were asked to participate in especially organized experiment sessions in the computer rooms of their
universities, effectively undermining the flexibility of the original design. No extra support was provided during these sessions but to be certain, a test was carried out for each item to see whether the results of these groups skewed the results of their subject group as a whole. Since this was never the case, the results of these subjects are not presented separately in the tables in this chapter.

9.2.2 English language competence of DNE and DNN compared
The Cloze Test, the last task in the experiment, was included in order to establish whether or not it is justified to assume that the DNE and DNN subjects differ only on the parameters writing experience and generalized discourse competence and not also on the parameter English language competence. This extra test was necessary since there was no other objective measure of language competence available: the backgrounds of the DNE and DNN subjects differed too much (see also Kellerman 1992).

In total, the subjects clozed an average of 75.12 items and this number allows scoring of acceptable answers (see Section 8.8 and Appendix A). DNE-subjects averaged 46.61 correct items (sd = 13.74), while DNN-subjects scored an average of 47.93 correct items (sd = 12.24) (for the distribution of the scores per group, see Table 9.2). Overall, the subjects scored 47.24 correct items with a standard deviation of 12.99. With F(1,92)=.241, and p=.625, there is no reason to assume different levels of English language competence for DNE and DNN subjects (effect sizes $\eta^2=.003$ and $d=.10$). In subsequent analyses, therefore, it will be assumed that these two groups only differ with regard to generalized discourse competence/writing competence and not with regard to language competence.

9.3 The ‘context-driven’ hypothesis
As Ellis (1994:676) and Bereiter and Scardamalia (1987:42-4, 195-6) have noted, evidence presented in support of a hypothesis needs to be convergent with findings from other experimental sources, if it is to be persuasive. The hypothesis that was formulated in Chapter 5 – the internal order of complex beginnings in English is context-driven and greatly depends on the text-strategy employed in the surrounding text – has until now been based on evidence gathered from one source only: an analysis of texts produced by native speakers of English who are expert writers. Should the results of the ENE-subjects (who are also English
native speakers and experienced writers) in the experiment correspond to outcomes predicted by the context-driven hypothesis, however, then this can be considered convergent evidence from a second source. To examine this, the ENE results of all experiment items involving a rhetorical or propositional adverb phrase in a complex/stepwise alternation will be discussed. Section 9.3.1 will focus on the results of Writing Items I-1 and II-2 (see Chapter 8 for further details). Section 9.3.2 will present the results of Judgment Items 1 and 3, and Section 9.3.3 will briefly consider the results of Unscrambling items 3, 5 and 7. Section 9.3.4 will summarize and discuss.

9.3.1 Writing items I-1 and II-2

The first item in Writing Task I, repeated below for convenience, was designed to elicit either a stepwise or a complex orientation involving the rhetorical adverbial *however*:

1. Using all the information below, write at most four sentences on Henrietta Lacks. The sentences should serve as the introduction
to a newspaper article discussing cloning. NOTE: The use of 'but' should be avoided
- Henrietta Lacks was born in Baltimore.
- she was born in 1920
- she died when she was 31
- she died of cancer
- she did not draw a lot of attention to herself during her life
- she achieved a curious form of immortality after her death
- her cells were the first to live on in thousands of test tubes around the world

Possible result passages are given in (2) below. The original passage was structured according to a temporal TSC and contained a complex orientation that supported this strategy. This is exemplified in (2a). The alternative in (2b) shows a stepwise orientation, which – according to the context-driven hypothesis – fits less well in this context: the rhetorical adverbial however is placed in a position where one would expect a temporal adverbial that supports and continues the previously initiated temporal TSC.

(2) Henrietta Lacks was born in Baltimore in 1920 and in 1951, only 31 years old, she died of cancer. It was the end of an inconspicuous life. During this life she did not draw a lot of attention to herself.

a. After her death, however, she achieved a curious form of immortality: her cells were the first to live on in thousands of test tubes around the world.

b. However, after her death, she achieved a curious form of immortality: her cells were the first to live on in thousands of test tubes around the world.

This writing task is an open-ended task, however, and, of course, subjects may well choose other ways than a complex beginning to express the contrast between Lacks’s unassuming life and the curious circumstances after her death. Despite the fact that the paper-and-pencil pilot test suggested differently, most ENE subjects indeed chose such an alternative solution. The most popular ones are in (3) below:
(3) a Henriette Lacks was born in Baltimore in 1920, and died of cancer when she was only 31. 

Though/Although/While she did not draw a lot of attention to herself during her life, she achieved a curious form of immortality after her death. Her cells were the first to live on in thousands of test tubes around the world.

b1 Born in Baltimore in 1920, Henrietta Lacks did not draw a lot of attention to herself during her life. However/Yet/Nevertheless, she achieved a curious form of immortality after her death of cancer at the age of 31. Her cells were the first to live on in thousands of test tubes around the world.

b2 Born in Baltimore in 1920, Henrietta Lacks did not draw a lot of attention to herself during her life, but/yet she achieved a curious form of immortality after her death of cancer at the age of 31. Her cells were the first to live on in thousands of test tubes around the world.

[b1+b2: 14 out of 61]

A total of 8 subjects did not express any contrast at all, while 11 subjects found yet other ways than those in (3). The 3 passages that did include a complex beginning are in (4):

(4) a Henrietta Lacks, who died at the age of 31 in 1959, did not draw attention to herself during her lifetime. However, in death she has achieved a curious form of immortality. Born in Baltimore in 1920, Lacks succumbed to cancer as a young woman. Through a complex set of circumstances, her cells were the first to live on in thousands of test tubes across the country. [ENE 39]

b Henrietta Lacks was born in Baltimore in 1920. She did not draw a lot of attention to herself during her life. However, when she died of cancer at age 31, she achieved a curious form of immortality: her cells were the first to live on in thousands of test tubes around the world. [ENE 41]

c Born in Baltimore in 1920, Henrietta Lacks’ life was unremarkable. When she died of cancer, however, at only 31 she achieved a curious form of immortality. Her cells were the first to be incubated in the search for a cure for cancer. The descendants
of those cells now live on in thousands of test tubes around the world. [ENE 63]

The passages in (4a) and (4b) contain a stepwise orientation. This makes sense, since neither passage is set up according to a temporal TSC: the temporal elements in the sentences preceding the complex beginnings are in sentence-final position, which - at first sight - indicates that no orientational role was intended for these elements. Note, however, that a complex orientation could well fit in these two contexts as well. In that case the two representational adverbials in the complex orientation would make an emphatic local connection to the sentence-final representational adverbial in the preceding sentence (‘chaining’). An example exhibiting this strategy will be discussed in Section 9.4.1 (see also Chapter 5). The passage in (4c), finally, contains a complex orientation in a prototypical context: when she died of cancer continues the thematic TSC initiated by Henrietta Lacks’ life (life vs. death). This means that all three passages support the context-driven hypothesis, but of course, their number is too low to be able to consider this persuasive corroborative evidence.

Now consider Item 2 in Writing Task II. In this task subjects did not have to write an entire paragraph, but just the final sentence of a given paragraph. Again, the information to be expressed in this final sentence was given:

(5) a Terrible as hurricanes and typhoons are, not all the consequences of these weather extremes are negative. In some rather arid regions the contribution of tropical cyclones to rainfall is crucial. <<20 to 50 percent of the annual rainfall is associated with tropical cyclones. This is an example. This is in Northwest Australia.>>

The item was included to check whether subjects would produce a complex orientation (In Northwest Australia, for example) in support of the spatial TSC that is initiated by in some rather arid regions, or whether they would produce a stepwise orientation (For example, in Northwest Australia) that did not support this TSC. As pointed out in Chapter 8, however, closer examination of this item revealed that a stepwise orientation can also be well motivated in this passage. In that case, the rhetorical text-strategy is initiated by some in In some rather
arid regions. The adverbial For example subsequently supports this strategy by selecting one particular region from the initial set of some regions. This means that complex orientations should occur about as frequently as stepwise orientations. The new prediction is therefore that subjects produce as many stepwise orientations as complex orientations for this item. Compared to the originally intended prediction (‘Result sentences should more often start with a complex orientation than a stepwise orientation’) this is rather weak, of course. Despite the fact that Table 9.3 neither shows specific preference for any sentence-opening (chi-square-test) nor that stepwise is more popular than complex (binomial test), this can hardly be considered convincing evidence. At the most, again, these results do not contradict the context-driven hypothesis.

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>complex</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage (all three categories)</td>
<td>43</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>Proportion (stepwise/complex only)</td>
<td>.57</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>Chi-square test (all three categories)</td>
<td>$\chi^2 (2) = 2.95$ and $p = .229$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binomial Test (stepwise and complex only)</td>
<td>$p = .381$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9.3: Complex beginnings in Writing Item II-2

In conclusion, although neither Writing Item contradicts the context-driven hypothesis, the results do not explicitly support the hypothesis either. Fortunately, the results for the Judgment Items are more convincing.

### 9.3.2 Judgment items 1 and 4

Rather than producing a new text or sentence, in the Judgment Task subjects had to evaluate given sentences within given contexts and this task was therefore certain to elicit judgments on complex and stepwise orientations. Consider, for instance, Judgment Item 1 in (6) below:
The view of crime as illness implies that it is individuals who need treatment, rather than society which needs reformation. However, if such a view becomes the orthodoxy, it will also not be long before burglars and other criminals will demand to be excused on the grounds of having the wrong balance of chemicals in their brain.

a. As every doctor knows and recognizes, of course, the brain is the seat of thought.
b. Of course, as every doctor knows and recognizes, the brain is the seat of thought.
c. As every doctor knows and recognizes, the brain is, of course, the seat of thought.

No one blames, therefore, people with Alzheimer’s disease for their lack of powers of concentration. The pathological process in their brain is not only an explanation, but a complete excuse. However, if this argument is taken to its logical conclusion – it utterly destroys the idea of personal responsibility.

The sentence in (6c) was inserted as a decoy; (6a) and (6b) represent a sentence starting with a complex orientation and one starting with a stepwise orientation respectively. All sentences were first presented in isolation and subjects were asked to indicate whether they found them ‘acceptable’, ‘doubtful’, or ‘unacceptable’. Only after judging all three sentences was the context provided, and then the subjects were asked to rank each sentence according to textual fit (see also Chapter 8). Subjects only had to rank the sentences they considered ‘acceptable’ or ‘doubtful’. When a sentence was judged as ‘unacceptable’ it was dropped from the ranking question. This means that some subjects had to rank three sentences and some – who judged all three sentences in an item as unacceptable – none at all. Subjects could rank the sentences on a scale from 1 to 3, with 1 standing for the best textual fit. The results were recoded in three relative categories, namely ‘sentence (a) fits better than sentence (b)’, ‘both sentences fit equally well’, and ‘sentence (b) fits better than sentence (a)’.

Since the context of the sentences in Judgment Item 3 is organized according to a rhetorical strategy (see all bold-faced elements in [6]), the context-driven hypothesis predicts that sentence (6b), the one with the stepwise orientation, will be considered to fit best: this orientation starts
with a rhetorical element and therefore it continues the rhetorical TSC initiated earlier. In order to make sure that no prejudices with regard to particular orders play a role (such as ‘A sentence can never start with however’ [see e.g. Nash 1986]) only preferences of subjects who judged sentence (a) and sentence (b) to be equally acceptable (either both are ‘acceptable’ or both are ‘doubtful’) were taken into account. For ENE-subjects, this comes down to a total of 33 judgments. Graph 9.4a shows that the subjects indeed prefer the stepwise orientation over the complex orientation; the results in this item therefore support the context-driven hypothesis ($\chi^2[2]=21.81, p<.001$, assuming an expected frequency of 10.7 per option [32/3]).

Consider also Judgment Item 4, repeated in (7) below, featuring a complex beginning with the rhetorical adverbial however:

(7) For years police corruption simply did not exist in the public’s mind. Policemen were brave, upstanding and trustworthy. No one would ever doubt the word of an officer.
   a However, by the early 1970s, this attitude was changing.
   b By the early 1970s, however, this attitude was changing.
   c This attitude was, however, changing by the early 1970s.

At that time, Sir Robert Mark, who took over as Metropolitan Police Commissioner, promised to do away with corruption within the force. His philosophy seemed to be: ‘A good police force is one that catches more criminals than it employs.’

Sentence (7c) is a decoy again and (7a) and (7b) start with a stepwise orientation and a complex orientation respectively. The context is organized according to a temporal strategy, and the context-driven hypothesis therefore predicts that sentence (7b) will be considered to fit best in this context. The preferences of 47 subjects could be taken into account and as Graph 9.4b shows, subjects indeed prefer sentence (b) over sentence (a) in this context ($\chi^2[2]=6.68, p=.035$). Especially since subjects earlier indicated that both sentences, to them, were equally acceptable, the results of the judgment items can be considered support for the context-driven hypothesis.
### Table 9.4a and 9.4b: preferences of sentences in context for Judgment Item 1 and 4

<table>
<thead>
<tr>
<th>Item 1 (n=32)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence a fits best</td>
<td>9</td>
</tr>
<tr>
<td>both sentences fit equally well</td>
<td>19</td>
</tr>
<tr>
<td>sentence b fits best</td>
<td>72</td>
</tr>
</tbody>
</table>

9.3.3 Unscrambling Items 3, 5 and 7

When looking for support for the context-driven hypothesis, the Unscrambling Task can, at first sight, not contribute much evidence: as was explained in Chapter 8, the contextual part of this particular task cannot be interpreted. However, the results of the non-contextual part of this task clearly show that there is more to the internal order of a complex beginning than the context in which it appears. Consider, therefore,
Unscrambling Items 3, 5, and 7, in examples (8), (9) and (10) respectively:

(8) was / by examining his brain / for example / when Lenin died / called upon / to find the secret of his genius / a pathologist

(9) for a business meeting / it / necessary / less often / therefore / be / will / in the future / to travel to a remote city

(10) the global temperature / to increase / moreover / by the year 2100 / because populations are growing / is expected / by 2.0 degrees

All three items were constructed in order to generate either a complex orientation (When Lenin died, for example; In the future, therefore; By the year 2100, moreover) or a stepwise orientation (For example, when Lenin died; Therefore, in the future; Moreover, by the year 2100). Now compare the positions of moreover and therefore in the result sentences in Graph 9.5. Without a context endorsing any kind of strategy, almost 70% of all subjects place moreover in the absolute initial position of a stepwise orientation, while only 32% of the subjects make a similar choice for
therefore. Notice, furthermore, that without any context legitimizing them, subjects do not often create a complex orientation, but that when they do, they most often do so in the therefore-item and hardly in the moreover-item. Chapter 5 suggested that this difference between moreover and therefore may be due to the fact that moreover has a more mobile counterpart in furthermore, while therefore has a set of less mobile counterparts that generally appear sentence-initially, such as as a result, so and consequently. For moreover, the canonical position seems to be sentence-initial, whereas therefore is habitually placed in other positions. The results for for example are interesting in this respect: for this adverbial there are neither more mobile counterparts nor less mobile counterparts readily available (except maybe for e.g.). That means that absolute sentence-initial position of a stepwise orientation and second initial position in a complex orientation are both equally likely. And indeed, for example is placed in a stepwise orientation only slightly less frequently than moreover, while it is also placed in a complex orientation only slightly less frequently than therefore.

This mechanism is also clear from Table 9.6, which shows the element that subjects first selected when constructing their sentences (note, by the way, that Table 9.6 – like all tables in this chapter that present results on construction processes – only includes data provided by subjects that belong to the process and results category in Table 9.1). Clearly, moreover and for example are more easily selected as sentence openers than therefore.

<table>
<thead>
<tr>
<th>first element selected</th>
<th>'moreover' - item</th>
<th>'for example'-item</th>
<th>'therefore'-item</th>
</tr>
</thead>
<tbody>
<tr>
<td>rhetorical element</td>
<td>19</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>other element</td>
<td>20</td>
<td>18</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>39</td>
<td>39</td>
</tr>
</tbody>
</table>

Cochran’s Q   
Q(17.86), p<.001

Table 9.6: First element selected and placed in Unscrambling Items 3, 5 and 7
These observations suggest two things. In the first place, for some semantic roles it is necessary to know more than one adverbial actively in order to be able to structure texts adequately. If a language user only knows/uses *moreover* but not *furthermore* she is likely to overproduce stepwise orientations. If a language user only knows/uses *therefore* but not *consequently* she is likely to overproduce complex orientations. In the second place, in ‘neutral contexts’ – i.e. contexts which do not explicitly suggest a complex orientation – language users will rather produce a stepwise orientation than a complex orientation. This sheds some new light on the analysis of the writing item involving *for example* in Section 9.3.1. Consider in this respect Table 9.7, which compares the results of two productive tasks involving *for example*:

<table>
<thead>
<tr>
<th>Writing Item 2</th>
<th>Unscrambling Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>stepwise orientation</td>
<td>19</td>
</tr>
<tr>
<td>complex orientation</td>
<td>12</td>
</tr>
</tbody>
</table>

McNemar-test for related samples: \( p = .035 \)

<table>
<thead>
<tr>
<th>Writing Item 2</th>
<th>Unscrambling Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>stepwise orientation</td>
<td>19</td>
</tr>
<tr>
<td>complex orientation</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 9.7: Position of *for example* in Writing Item II-2 (with context) and Unscrambling Item 3 (no context)

In total, 3 native speakers produced a stepwise orientation in Writing Item 2, but chose to construct a complex orientation for Unscrambling item 3. At the same time, 12 native speakers produced a stepwise orientation in the unscrambling item while they produced a complex orientation in the writing item. The other native speakers constructed the same orientation in both items. These results suggest that native speakers change preference from stepwise to complex orientation significantly more often in a context that also suggests the use of a complex orientation than in a task without such a context, or in fact, without any context at all. This indicates that the context of the sentence in the writing
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item did have a significant effect on the internal order of the complex beginning and these results can therefore be considered corroborative evidence for the context-driven hypothesis, after all (note that the McNemar test requires that both variables are dichotomous and that therefore only cases in which the subjects produced either a complex or a stepwise orientation could be included in this test).\(^5\)

9.3.4 Conclusion
In conclusion, the ENE-results of the two Judgment Items clearly support the context-driven hypothesis. The results of the production tasks (writing and unscrambling) are rather more ambiguous. While they do not contradict the hypothesis, at first sight they do not explicitly support it either. However, when the position of for example in a productive task with a context (Writing task II-2) is compared to the position of for example in a productive task without a context (Unscrambling task 3) it seems clear that context does influence the type of sentence opening. This is not all there is to the internal order of complex beginnings, however. The results discussed in Section 9.3.3 also show that the relative order in a complex beginning depends on the specific adverbial that is selected as well as on the context: some adverbials occur more easily in sentence-initial position, while others are habitually placed in other sentence-positions. This means that in order to structure a text adequately, a language user will have to know and use sets of adverbials within one semantic field (rather than pick just one within each field as a favorite), so that she can select the appropriate adverbial and the appropriate adverbial position for each situation. This may indicate that language competence plays at least some role in the production of complex beginnings. The rest of this chapter will be concerned with comparisons between results of learners and native speakers, and between expert writers and novice writers in an attempt to explain differences found between the NEC and the LEC.

9.4 Stepwise and complex orientations
At the end of Chapter 6, which compared the complex beginnings in the LEC with the complex beginnings in the NEC, the following observations were made with regard to the use of stepwise and complex orientations:
The writers of the LEC-corpus produce more complex beginnings in general than the writers of the NEC-corpus do.

The writers of the LEC-corpus produce more stepwise orientations and fewer complex orientations than the writers of the NEC-corpus do.

The writers of the LEC-corpus produced stepwise orientations in contexts in which, according to the context-driven-hypothesis, a complex orientation may fit better.

The main question resulting from this observation was:

- Are these differences due to the fact that (a) the LEC-writers are language learners, (b) the LEC-writers are novice writers and therefore also have a lower level of discourse competence, (c) the LEC-writers are both language learners and novice writers, or that (d) the LEC and the NEC corpora do not match well enough?

If language competence is an important factor (factor a), then DNE and DNN results (both language learners) should show significant differences in comparison to the ENE and ENN results (both native speakers). If writing experience/discourse competence is an important factor (factor b), then DNE and ENE results (both expert writers) on the one hand should show significant differences in comparison to the ENE and ENN results (both novice writers) on the other hand. If the differences are due to a combination of language competence and discourse competence/writing experience (factor c), then the interaction between language competence and writing competence should have a significant influence. If none of the parameters can be shown to cause systematic differences then we may have to consider factor d: the corpora do not match or at least they do not match well enough.

For the first three factors, the following set of questions is relevant:

1. Do language learners/novice writers know that complex orientations are grammatically acceptable in English?
2. Are language learners/novice writers aware of TSCs in English passages?
3. Are language learners/novice writers as aware of TSCs as native speakers/expert writers are?
4. Do language learners/novice writers produce as many complex beginnings as native speakers do?
(5) Do language learners/novice writers produce as many stepwise and complex orientations as native speakers do?

(6) Do language learners/novice writers start their sentences with a rhetorical adverbial, and then focus on the core of the message in the main clause (see Chapter 7)?

(7) Can, from the perspective of writing processes, production of complex beginnings be associated with knowledge telling (see Chapter 7)?

(8) Can, from the perspective of writing processes, production of stepwise orientations be associated with knowledge-telling processes and production of complex orientations with knowledge-transformation processes (see Chapter 7)?

Sections 9.4.1-9.4.3 will investigate all items that were constructed in order to investigate complex/stepwise alternations, namely Judgment Items 1 and 4 (Section 9.4.1), Unscrambling Items 3, 5 and 7 (Section 9.4.2) and Writing Items I-1 and II-2 (Section 9.4.3) in order to answer these questions. Section 9.4.4 will summarize.

9.4.1 Judgment Items 1 and 4

The judgment items were designed to find out (1) whether subjects know that complex orientations are possible, (2) whether they recognize a TSC in a text and select the complex beginning that best supports this TSC, and (3) whether language learners and/or novice writers are as good at this as native speakers and/or expert writers. Since subjects do not have to produce any text themselves for these items, in terms of the writing process this task is more closely associated to monitoring or editing than to actual writing. Below the results will be analyzed according to the language competence, general discourse competence, and the interaction between the two, respectively.

If learners’ underproduction of complex orientations can be explained by the fact that they are not aware that these orientations are possible, they should judge a sentence containing a complex orientation as less acceptable than one containing a stepwise orientation. They should furthermore judge a sentence containing a complex orientation as less acceptable than native speakers do. Consider for learners’ judgments of Item 1 Table 9.8. In this table sentence (x) > sentence (y) stands for sentence (x) was judged as more acceptable than sentence (y), while sentence (x) < sentence (y) stands for sentence (x) was judged as less
acceptable than sentence (y). Furthermore \( n'' \) stands for sample size corrected for ties.

<table>
<thead>
<tr>
<th>Judgment</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>As every doctor knows and recognizes, of course &gt; Of course, as every doctor knows and recognizes</td>
<td>9</td>
</tr>
<tr>
<td>As every doctor knows and recognizes, of course &lt; Of course, as every doctor knows and recognizes</td>
<td>58</td>
</tr>
<tr>
<td>Ties (i.e. both sentence openings are judged equally acceptable)</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>112</strong></td>
</tr>
</tbody>
</table>

**Sign Test (n=112; n''=67)**  

\[ Z = 5.864, p < .001 \]

Table 9.8: judgment of sentence (a) and sentence (b) in Judgment Item 1 by learners of English

According to Table 9.8, learners indeed think that the complex orientation in Judgment Item 1 is less acceptable than the stepwise orientation. However, with 22% of the native speakers and 25% of the learners judging the sentence as unacceptable (\( n=102 \) and \( n=112 \), respectively), learners do not find the sentence less acceptable than native speakers do (\( \chi^2[2] = .41, p = .814 \) and \( C = .04 \)).

Now consider the analysis for Judgment Item 4 in Table 9.9, which reveals a rather unexpected result. According to Table 9.9, in this case learners judge the complex orientation as more acceptable than the stepwise orientation (28 subjects judge the complex orientation as more acceptable than the stepwise orientations). That is the opposite of what was hypothesized. Furthermore, with 87% of the native speakers and 88% of the learners judging the sentence as acceptable (\( n=104 \) and \( n=112 \), respectively), there is no significant difference between learner and native judgements (\( \chi^2[2] = .233, p = .311 \) and \( C = .10 \)). Based on the evidence provided by these two items, one cannot say therefore that the observed underproduction of complex orientations in the LEC is caused
by the fact that learners do not know such a construction is possible, nor can one say that it is caused by the fact that learners think complex orientations are less acceptable than stepwise orientations. Finally it is also not possible to say that differences between LEC and NEC production of complex orientations are due to the fact that learners think that complex orientations are less acceptable than native speakers do.

<table>
<thead>
<tr>
<th>Judgment</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>However, by the early 1970s &gt; By the early 1970s, however</td>
<td>7</td>
</tr>
<tr>
<td>However, by the early 1970s &lt; By the early 1970s, however</td>
<td>28</td>
</tr>
<tr>
<td>Ties</td>
<td>77</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>112</strong></td>
</tr>
</tbody>
</table>

| Sign Text (n=112; n"=35) | Z = -3.381, p<.001 |

*Table 9.9: judgment of sentence (a) and sentence (b) in Judgment Item 4 by learners of English*

The analysis of the Judgment Items continues with checking (1) whether learners are able to select the sentence-opening that best supports the TSC in the context (questions [2] above) (discourse competence) and (2) whether learners differ in their choices from native speakers (question [3] above). Again, we will only take into consideration the preferences of those subjects who judged both sentences at the same level (see also Section 9.3.2). For Judgment Item 1, that means 44 learner scores and 47 native scores. For Item 4, 76 and 79 scores should be considered respectively. Remember that the context-driven hypothesis predicts that in both items the b-sentence is preferred. Graph 9.10a and 9.10b show that both for Item 1 ($\chi^2[2]=23.46, p<.001$) and for Item 4 ($\chi^2[2]=18.60, p<.001$) learners indeed favor sentence (b). This indicates that learners are aware of TSCs and are able to select the sentence opening that best supports this TSC in a particular context.
Furthermore, when compared to native speaker preferences, there is no significant difference between the number of learners and the number of native speakers that select the expected sentence as being the sentence that displays the best textual fit. For Item 1, 65% of the learners (i.e. 28 out of 43) and 70% of the native speakers (32 out of 46) selected the predicted sentence ($\chi^2 = 1.04, p = .594$ and $C = .11$). For item 2, 54% of the learners (i.e. 37 out of 76) and 47% of the native speakers (40 out of 73) selected the predicted sentence ($\chi^2 = 2.19, p = .334$ and $C = .12$).

These results convincingly establish that learners do not only know that complex beginnings are possible but that, in a monitoring task, their
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ability to select the sentence opening that best supports the TSC in a context does not differ from native speaker ability to select such a sentence opening. This gives a preliminary answer to questions 2 and 3 in the introduction. However, it should be kept in mind that these are the outcomes of a monitoring task rather than actual writing.

To check to what extent discourse competence may play a role in the results of the Judgment Items we will review the items from this perspective. The results for Judgment Item 1 are straightforward again. In total 10% of the novice writers (n=9) considered the complex orientation (As every doctors knows and recognizes, of course) to be more acceptable than the stepwise orientation, 35% (n=33) considered both sentence openings equally acceptable and a significant majority of 55% (n=52; Z = - 5.423, p=<.001) preferred the stepwise orientation (Of course, as every doctor knows and recognizes) over the complex orientation. This is in accordance with the hypothesis that novice writers may find stepwise orientations more acceptable than complex orientations. However, in comparison to expert writers the results do not support the hypothesis that novice writers think the complex orientation is less acceptable than expert writers do (40% of the novice writers [37 out of 94] find a complex orientation sentence acceptable against 47% of the expert writers [58 out of 121]; $\chi^2[2]=3.46, p = .177$ and C = .13).

The results for Judgment Item 4 do not support the hypotheses either. In the first place, novice writers consider the stepwise orientation and the complex orientation to be equally acceptable (15% considered stepwise more acceptable than complex, 5% considered complex more acceptable than stepwise, and 80% considered them equally acceptable; n=94, Z=-1.814 and $p=.070$). In the second place, novice writers find the complex orientation as acceptable as expert writers do ($\chi^2[2]=4.61, p = .100$ and C = .14).

We will now check (1) whether novice writers are able to select the sentence opening that best supports the TSC and (2) whether they make the same choices as expert writers do. For Judgment Item 1, the results of 58 expert writers and 33 novice writers are considered; for Item 4, 81 and 74 results respectively are taken into account. Consider the Graphs in 9.11 for the novice writer results:
It is clear that both for Item 1 ($\chi^2[2]=36.68$, and $p<.001$) and for Item 4 ($\chi^2[2]=12.85$, and $p=.002$) novice writers prefer the sentence predicted by the context-driven hypothesis. Furthermore, with 51% of the novice writers (37 out of 73) and also 51% of the expert writers (40 out of 79) selecting the predicted sentence as the one that fits best for Item 4, there is no difference between expert writers and novice writers ($\chi^2[2]=.47$, $p =.789$ and $C = .06$). For Item 1, the categories ‘sentence (a) fits best’ and ‘both sentence fit equally well’ had to be combined (due to low expected
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frequencies), but in this test, too, novice writers did not differ significantly from expert writers either ($\chi^2[1]=.87, p=.350$).

The above analyses show that novice writers are generally aware that complex orientations are not only possible but also acceptable. Furthermore, with regard to their capacity to recognize which sentence opening fits best in a particular context (discourse competence), novice writers are not outdone by expert writers. Generally speaking, therefore, these results indicate that, in a receptive task, a lower degree of discourse competence does not systematically influence judgment and use of complex orientations.

Neither the factor language competence nor the factor discourse competence could be shown to have a significant influence on the judgment of stepwise and complex orientations nor on the recognition of TSCs in a passage. It may be the case, however, that the DNE subjects compensated for their lack in language competence with their discourse competence, while the ENN subjects compensated for their lack in discourse competence with their native language competence. ENE subjects, being both expert writers and native speakers, did not need to compensate and DNN subjects, being both novice writers and language learners, could not compensate. If the DNE and ENN subjects did compensate, then investigation of the individual parameters cannot possibly reveal anything. We will therefore consider now if judgment and assessment of textual fit of the sentences in the two Judgment Items may have been influenced by the interaction between the factors language competence and discourse competence. This was investigated with the help of a loglinear Logit analysis: the goodness-of-fit of a saturated model (which includes both the main effects for language competence and for discourse competence, as well as the interaction between the two) is compared to the goodness-of-fit of a model in which the interaction between language competence and general writing competence is filtered out. The difference between the two models then represents the influence of this factor. Consider first the judgment of the sentences (a) and (b) in Item 1 and 4 respectively:
Table 9.12: judgment of sentences in Judgment Items 1 and 4 - language competence X writing competence

| Judgment Item | sentence | difference in comparison to a saturated model (Pearson’s $\chi^2$) | df | Significance $p = ..$
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a</td>
<td>2.148</td>
<td>2</td>
<td>.342</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>.005</td>
<td>2</td>
<td>.998</td>
</tr>
<tr>
<td>4</td>
<td>a</td>
<td>1.204</td>
<td>2</td>
<td>.540</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>1.100</td>
<td>2</td>
<td>.577</td>
</tr>
</tbody>
</table>

Table 9.13: judgment of sentences in Judgment Items 1 and 4 - language competence X writing competence

| Judgement Item | difference in comparison to a saturated model (Pearson’s $\chi^2$) | df | Significance $p = ..$
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.291</td>
<td>2</td>
<td>.524</td>
</tr>
<tr>
<td>4</td>
<td>1.599</td>
<td>2</td>
<td>.450</td>
</tr>
</tbody>
</table>

For none of the judgments does the exclusion of the interaction between language competence and general writing competence yield a goodness-of-fit value that requires rejection of the model. Furthermore, as Table 9.15 shows, the interaction between the two does not influence the rank of the sentences in the context. In sum, this means that for the stepwise/complex Items in the Judgment Task results were not influenced by whether a subject was ENE (high language competence and high discourse competence) or DNN (lower language competence and lower discourse competence).

Taking all results for Judgment Items 1 and 4 into account it is fair to say that for these items (a) language learners do know that complex
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9.4.2 Unscrambling Items 3, 5 and 7

The items in the Unscrambling task tax the subjects more than the Judgment Items since in this task they have to construct sentences rather than just evaluate them. Although this task is therefore more closely associated to language production, obviously it is still a far cry from actual writing: subjects do not have to gather and select information and, importantly, the element 'transformation of knowledge' is filtered out. In this task the subjects have no choice but to use all the elements and to use them in the form in which they are provided. As a result, they may produce more complex beginnings than they normally would, as they cannot 'camouflage' their representational and rhetorical information by integration into the subject, or combination of two or more information elements into one adverbial clause (compacting).

The main questions with regard to these Unscrambling Items are questions (4) (‘do language learners/novice writers produce more complex beginnings than native speakers/expert writers do?’) and (5) (‘do language learners/novice writers produce more stepwise and less complex orientations than native speakers/expert writers do?’). Furthermore, since the order in which subjects built their sentences was logged, question (6), too, can be explored: ‘are language learners/novice writers more likely to start their sentences with a rhetorical adverbial?’

orientations are possible; (b) their judgments of complex orientations do not differ from native speaker's judgments; (c) language learners are able to determine which sentence opening fits best in a specific context; (d) they are as able to do so as well as native speakers are. The same conclusions hold for a comparison between novice writers and expert writers. Finally, it could not be shown that language-specific writing competence was a distinguishing factor in this task. This last outcome fits the discourse competence hypothesis, which holds that it is not likely that differences between language-specific discourse competence of NEC and LEC writers can explain that differences between frequency of stepwise and complex orientations found in both corpora (see Chapter 7). In conclusion, the results of this Judgment Task did not convincingly replicate the results of the contrastive corpus analysis: for this task none of the parameters explain the differences that were observed between the NEC and the LEC.
The Unscrambling Items that will be discussed in this section are Items 3, 5, and 7. While Item 2 (see [11] below) was also designed to investigate the complex/stepwise alternation (*In five years, according to the latest business plan* or, alternatively *According to the latest business plan, in five years*), it had to be dropped from the study: most subjects constructed a sentence such as *According to the latest business plan, the company should be turning over 18 millions pounds in five years.*

(11) 18 million pounds / according to the latest business plan / be / in five years / the company / turning over / should

We will first investigate whether the results of a task such as this support the observation that language learners produce more complex beginnings than native speakers do (question [4]). Consider for this Table 9.14:

<table>
<thead>
<tr>
<th>Item 3: <em>for example</em></th>
<th>Item 5: <em>therefore</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>compl. beg.</td>
</tr>
<tr>
<td>native</td>
<td></td>
</tr>
<tr>
<td>(n=103)</td>
<td>67</td>
</tr>
<tr>
<td>learner</td>
<td></td>
</tr>
<tr>
<td>(n=114)</td>
<td>68</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\chi^2(1) = .51, p = .822, C = .02$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item 7: <em>moreover</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>compl. beg.</td>
</tr>
<tr>
<td>native</td>
</tr>
<tr>
<td>learner</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Table 9.14: Results in unscrambling items 3, 5, and 7 (complex beginning vs. other) (scores are percentages)
The difference between Items 3 and 5 on the one hand and Item 7 on the other hand is striking. While for Items 3 and 5 there is virtually no difference between the number of complex beginnings in general that are produced by native speakers and by learners, for Item 7 native speakers produce more complex beginnings than learners do.

If we then consider Table 9.15, which compares the stepwise orientations to the complex orientations for these items (question [5]), an explanation seems at hand. Again, there are no differences between learner and native speaker results for Item 3 and Item 5, but for Unscrambling Item 7 we find that the high frequency of complex beginnings reported in Table 9.14 is due to the fact that in this item native speakers produce many more stepwise orientations than learners do (n=63, which is 64% versus n=48, which is 44%).

<table>
<thead>
<tr>
<th>Item 3: for example</th>
<th>Item 5: therefore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>step</td>
</tr>
<tr>
<td>native</td>
<td>(n=103)</td>
</tr>
<tr>
<td>learner</td>
<td>(n=114)</td>
</tr>
</tbody>
</table>
| \( \chi^2(2) = 3.59, p = .167, C = .13 \) | \( \chi^2(2) = .68, p = .714, C = .06 \)

<table>
<thead>
<tr>
<th>Item 7: moreover ( ^6 )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>native</td>
</tr>
<tr>
<td>learner</td>
</tr>
</tbody>
</table>
| \( \chi^2(2) = 8.82, p = .012, C = .20 \)

Table 9.15: stepwise orientations, complex orientation and other in Unscr. Item 3, 5, and 7 (scores are in percentages)
While in itself this is contrary to the expectations (learners were hypothesized to produce more stepwise orientations than native speakers), it does indicate again that some language competence is necessary in order to recognize the most obvious position for individual rhetorical satellites. For *moreover*, this position is sentence-initial (cf. Jacobson 1964).

That native speakers are sensitive to the particularities of the individual rhetorical satellites in each item is also obvious from Table 9.16, which shows that the subjects in this group dealt differently with each of the three items (see Table 9.16; $p=.004$). Learners, however, tended to choose the same solution for each of the three items. That is, if a subject produced a stepwise orientation for Item 3, it is likely that Items 5 and 7 will feature a stepwise orientation in the result sentence as well (see Table 9.16 again; $p=.803$). Alternatively, if a subject produced a different solution for Item 3 it is likely that this subject's results for Items 5 and 7 feature a different solution as well.

<table>
<thead>
<tr>
<th></th>
<th>Native Speakers (N = 90)</th>
<th>Learners (N = 107)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>stepwise</td>
<td>complex or other</td>
</tr>
<tr>
<td><em>Item 3: for example</em></td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td><em>Item 5: therefore</em></td>
<td>36</td>
<td>54</td>
</tr>
<tr>
<td><em>Item 7: moreover</em></td>
<td>58</td>
<td>32</td>
</tr>
</tbody>
</table>

*Cochran's Q*  
Q(2) = 11.04, $p = .004$  
Q(2) = 0.438, $p = .803$

Table 9.16: Results in unscrambling items 3, 5, and 7

Let us now consider question (6), which concerns the production process of complex beginnings. In order to find adequate classes for the categorization of the different production processes, I returned to the language competence hypothesis formulated in Chapter 7, namely that it
may be the case that learners, more than native speakers, start their sentence construction by placing a rhetorical satellite in sentence-initial position to be rid of it, so they can then focus on construction of the core message (consisting of predicate plus representational satellites). When producing the core message they then first place the representational adverbials, again to be rid of them, and subsequently focus on predicate construction, from a grammatical perspective probably the most complicated task, especially for a language learner. Alternatively, learners may first produce the core message, and then append or prepend the satellites. It was hypothesized that either procedure may result in a stepwise orientation rather than in a complex one. The relevant elements to distinguish in the production process are therefore rhetorical satellite (RHETORICAL), sentence-initial representational satellite (REPRESENTATIONAL) and predication including non-initial representational satellites (PREDICATION). This yields the following classes for the production process of complex beginnings for this item:

(12) a  Process I: Rhetorical, Representational, Predicational
b  Process II: Rhetorical, Predication, Representational
c  Process III: Representational, Rhetorical, Predication
d  Process IV: Representational, Predication, Rhetorical
e  other: Predication, Rhetorical, Representational and Predication,
   Representational, Rhetorical and interruption of construction of
   Predication by placement of Rhetorical or Representational

Notice that the orders in (12) do not represent order of the elements in the results, but the order in which the subjects selected their elements. That is, although the order Rhetorical, Representational, Predicational in Process I suggests a stepwise orientation (However, in Britain they do things differently) it can also result in a complex orientation, as is shown by the construction process in (13):

(13) 1 However
    2 In Britain however
    3 In Britain however, they do things differently

In (14a)-(14e) each production order is illustrated with the help of one of the actual result files. In each line the change in comparison to the previous log is indicated in italics and the numbers indicate the time at
which the move was made (the clock counts down from 2:00 to 0:00 minutes). The protocol in (14a) is given in full. The rest of the protocols are summarized where possible.

(14) a **Process I - Rhetorical, Representational, Predicational:**
Results of Unscrambling Task Part 1 – Item 3: DNE 11

1:53    *For example*
1:52    For example *when Lenin died*
1:50    For example when Lenin died *a pathologist*
1:48    For example when Lenin died a pathologist *was*
1:46    For example when Lenin died a pathologist was *called upon*
1:44    For example when Lenin died a pathologist was called upon *to find the secret of his genius*
1:42    For example when Lenin died a pathologist was called upon to find the secret of his genius *by examining his brain*
1:39    For example when Lenin died a pathologist was called upon to find the secret of his genius by examining his brain. [full stop added]
1:36    For example, when Lenin died a pathologist was called upon to find the secret of his genius by examining his brain. [comma added]

b **Process II - Rhetorical, Predication, Representational:**
Results of Unscrambling Task Part 1 – Item 3: ENE 23

1:49    *For example*
1:47-1:28 For example, *a pathologist was called upon to find the secret of his genius by examining his brain.*
1:22    For example *when Lenin died, a pathologist was called upon to find the secret of his genius by examining his brain.*

c **Process III - Representational, Rhetorical, Predication:**
Results of Unscrambling Task Part 1 – Item 3: ENE 23

1:45    *When Lenin died*
1:39-1:29 When Lenin died, *for example,*
When Lenin died, for example, a pathologist was called upon to find the secret of his genius by examining his brain.

**Process IV - Representational, Predication, Rhetorical:**

**Results of Unscrambling Task Part 1 – Item 3: DNE 70**

1:40 When Lenin died
1:31-1:05 When Lenin died a pathologist was called upon to find the secret of his genius by examining his brain.

0:55 For example when Lenin died a pathologist was called upon to find the secret of his genius by examining his brain.

0:50 For example, when Lenin died a pathologist was called upon to find the secret of his genius by examining his brain. [comma added between For example and when Lenin died]

**other: Results of Unscrambling Task Part 1 – Item 3: DNN 58**

1:45-1:41 A pathologist was called upon
1:35 For example a pathologist was called upon
1:33 For example, a pathologist was called upon [comma added]
1:30 For example, when Lenin died a pathologist was called upon
1:26-1:22 For example, when Lenin died a pathologist was called upon to find the secret of his genius by examining his brain. [full stop added]

**other: Results of Unscrambling Task Part 1 – Item 3: DNE 18**

1:51-1:44 A pathologist was called upon
1:40 A pathologist was called upon when Lenin died
1:34 A pathologist was called upon when Lenin died to find the secret of his genius
1:29 When Lenin died a pathologist was called upon to find the secret of his genius
1:22 When Lenin died for example a pathologist was called upon to find the secret of his genius
When Lenin died for example a pathologist was called upon to find the secret of his genius by examining his brain.

Notice that a number of protocols demanded interpretation before they could be categorized. Consider for instance the protocol in (15), for which it is assumed that the subject neither knew how to move elements that were already placed, nor how to insert new elements in between elements that were already placed. Consider also the protocol in (16), for which it is assumed that the subject did not intend to construct a complex orientation but simply did not manage to place the adverbial at the preferred place right away. This assumption is based on the fact that the same move was encountered in many protocols and that in these cases it was followed by various fruitless attempts to move the newly inserted adverbial (as indicated by the starred sentences in [15]). Both protocols indicate that despite extensive testing, the Graphic User Interface (GUI) of the experiment software was not transparent enough and/or did not work well enough. Again, this stresses the importance of extensive pilot testing of all human computer interaction elements of software.

(15) **Results Unscrambling Task Part 1 – Item 3: DNN 4**

1:50-1:20  *When Lenin died a pathologist was called upon*  
1:05  *When Lenin died was called upon*  
1:03  *When Lenin died was for example called upon*  
1:01  *When Lenin died for example, called upon*  
0:54  *When Lenin died for example, [called upon is removed]*  
0:49-043  *When Lenin died for example, a pathologist was called upon to find the secret of his genius by examining his brain.*
Results of the experiment

(16) **Results Unscrambling Task Part 1 – Item 3: ENN 50**

1:52-1:44 *A pathologist was called upon when Lenin died*

1:39 A pathologist for example was called upon when Lenin died

1:37 *A pathologist for example was called upon when Lenin died (for example)*

1:36 *A pathologist for example was called upon when Lenin died (for example)*

1:35 *For example a pathologist was called upon when Lenin died*

1:32-1:27 For example, when Lenin died, a pathologist was called upon [also commas added]

1:17-1:05 For example, when Lenin died, a pathologist was called upon to find the secret of his genius by examining his brain

Now look at Table 9.17, which shows the association between the four processes and the three sentence openings in Unscrambling Item 3 (for each sentence opening frequency and proportion are given). It seems that specific processes can indeed be associated with specific sentence openings. For instance, a stepwise orientation is generally the result of process I (placement order is rhetorical, representational, predication) or IV (placement order is representational, predication, rhetorical), while a complex orientation is most often the result of process III (representational, rhetorical, predication) or IV (representational, predication, rhetorical) (consider for both associations the gray areas in the Table). Analysis of Items 5 and 7 yields similar results. (All of these results have to be interpreted cautiously, however, since many cells in the table are empty). Interestingly, an association of stepwise orientations with process I and of complex orientations with process III may indicate that complex beginnings can indeed be seen as a cognitive whole, i.e. as a functional unit. This hypothesis would be supported if other experiments, for instance, consistently showed a longer pause between construction/reading of the complex beginning and construction/reading of the sentence (longer at least than pauses in the middle of cognitive units). The present experiment cannot provide such data.
If learners, therefore, build their sentence significantly more frequently according to rhetorical, representational, predication-order or according to representational, predication, rhetorical-order, it may be the case that they potentially produce more stepwise orientations than native speakers do. However, as Table 9.18 shows, this is not the case (note that Process II [Rhetorical, Predication, Representational] is included in the category other, to prevent too many cells with an expected frequency of <5). For Items 3 and 5, learners apply similar procedures to native speakers. For Item 7 native speakers used the stepwise process more often, but since they indeed produced more stepwise orientations, this was to be expected.

<table>
<thead>
<tr>
<th>Process</th>
<th>I</th>
<th>III</th>
<th>IV</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>stepwise</td>
<td>.53</td>
<td>7</td>
<td>1</td>
<td>20</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td>.55</td>
<td>.07</td>
<td>.01</td>
<td>.21</td>
<td>1.00</td>
</tr>
<tr>
<td>complex</td>
<td>2</td>
<td>16</td>
<td>7</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>.07</td>
<td>.00</td>
<td>.53</td>
<td>.23</td>
<td>1.00</td>
</tr>
<tr>
<td>other</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>34</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>.02</td>
<td>.11</td>
<td>.28</td>
<td>.60</td>
<td>1.00</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>13</td>
<td>17</td>
<td>43</td>
<td>54</td>
</tr>
</tbody>
</table>

Table 9.17: Production processes for Unscrambling Items 3

<table>
<thead>
<tr>
<th>Item 3: For example</th>
<th>Item 5: Therefore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>native (n = 107)</td>
<td>31</td>
</tr>
<tr>
<td>learner (n=76)</td>
<td>30</td>
</tr>
<tr>
<td>$\chi^2(3) = 0.55, p = .908, C = .06$</td>
<td>$\chi^2(3) = 4.79, p = .188, C = .16$</td>
</tr>
</tbody>
</table>

Table 9.18: Production processes of all sentence-openings for Unscrambling Items 3, 5, 7 (scores are in percentages)
A final question that can be asked is whether learners produce, for instance, the stepwise or complex orientation differently than native speakers do. While for complex orientations this could not be tested for statistical reasons, for the stepwise orientation no differences were detected for either of the items (Item 3: $\chi^2(2)=.49\), $p=.782$; Item 5: $\chi^2(2)=2.32\), $p=.313$; and Item 7: $\chi^2(2)=2.18\), $p=.336$).

In conclusion, the influence of language competence can be found in the results and process of Item 7 (native speakers produce more stepwise orientations) (see Table 9.14 and 9.15), and in the fact that native speakers tend to approach each item in its own right (see Table 9.16), while learners seem to apply the same strategy for each item they encounter. No further influences of the factor Language competence could be detected.

Moving on to the factor writing competence, we will start with question (4) again: do novice writers produce more complex beginnings than expert writers do. Consider for this Table 9.19. According to these results, novice writers produce as many complex beginnings in general as expert writers do. When we consider production of stepwise orientations and complex orientations separately, however, (see Table 9.20) we find that (a) for item 3 and 5 novice writers produce fewer complex orientations and (b) for Item 5 they also produce more stepwise orientations. These results support the outcome of the contrastive corpus analysis, and for now that singles out the factor discourse competence as an important candidate for explaining the differences between the frequency of stepwise and complex orientations in the NEC and the LEC.
For Item 7, furthermore, no significant differences were noted, but given the characteristics of *moreover*, this is not surprising (see Section 9.3).

<table>
<thead>
<tr>
<th></th>
<th>Item 3: <em>for example</em></th>
<th>Item 5: <em>therefore</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>complex beginning</td>
<td>other</td>
</tr>
<tr>
<td><strong>expert</strong></td>
<td>(n=122) 73 27</td>
<td></td>
</tr>
<tr>
<td><strong>novice</strong></td>
<td>(n=95) 61 39</td>
<td></td>
</tr>
<tr>
<td>( \chi^2(1)=3.46, p = .063, C = .13 )</td>
<td>( \chi^2(1)=2.87, p = .090, C = .12 )</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Item 7: <em>moreover</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>complex beginning</td>
</tr>
<tr>
<td><strong>expert</strong></td>
<td>(n=121) 61 39</td>
</tr>
<tr>
<td><strong>novice</strong></td>
<td>(n=86) 48 52</td>
</tr>
<tr>
<td>( \chi^2(1)=3.70, p = .054, C = .13 )</td>
<td></td>
</tr>
</tbody>
</table>

Table 9.19: Results in unscrambling items 3, 5, and 7 (complex beginning vs. other) (scores are in percentages)

When the production processes of novice writers and expert writers are compared we find that it is not possible to show any influence of *discourse competence* on production processes of the result sentences (for Item 3: \( \chi^2(3)=1.85, p = .605 \); for Item 5: \( \chi^2(3)=2.82, p = .421 \); and for Item 7: \( \chi^2(3)=2.82, p = .421 \)).
Results of the experiment

So far, the results of the Unscrambling Items 3, 5 and 7 revealed an influence of discourse competence for Items 3 and 5, and an influence of language competence for Item 7. We will now look at the interaction between the two factors again. The same procedure as in 9.4.1 will be followed: with the help of a loglinear Logit analysis, the goodness-of-fit of a saturated model is compared to the goodness-of-fit of a model in which the factor language competence $\times$ general writing competence is filtered out. The difference between the two models then represents the influence of this factor.

As the Tables in 9.21 show, language-specific writing competence neither influenced the number of complex beginnings in general (Table 9.21a) nor the number of stepwise and complex orientations in particular (Table 9.21b).7
<table>
<thead>
<tr>
<th>Item</th>
<th>difference with saturated model (Pearson's $\chi^2$)</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1.078</td>
<td>1</td>
<td>.299</td>
</tr>
<tr>
<td>5</td>
<td>.000</td>
<td>1</td>
<td>.999</td>
</tr>
<tr>
<td>7</td>
<td>.056</td>
<td>1</td>
<td>.813</td>
</tr>
</tbody>
</table>

Table 9.21a: complex beginnings in Unscrambling Items 3, 5 and 7

<table>
<thead>
<tr>
<th>Item</th>
<th>difference with saturated model (Pearson's $\chi^2$)</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.495</td>
<td>2</td>
<td>.174</td>
</tr>
<tr>
<td>5</td>
<td>.423</td>
<td>2</td>
<td>.810</td>
</tr>
</tbody>
</table>

Table 9.21b: stepwise and complex orientations in Unscrambling Items 3, 5 and 7

Finally, the interaction between *language competence* and *writing competence* neither influenced the overall processes ($p = .502$, $p=.279$, $p=.916$ for items 3, 5 and 7 respectively) nor those that subjects used to build stepwise orientations ($p = .984$, $p=.057$, $p=.961$ for items 3, 5 and 7 respectively):

In conclusion, in the first productive task under consideration the indication is that differences between the NEC and the LEC in stepwise/complex orientations may be due to *generalized discourse competence/writing experience* rather than to *language competence* or *language-specific discourse competence*. While novice writers do not produce more complex beginnings in general (and note that this could be due to the fact that in this task expert writers were limited in the type of solution they found; they could not, for instance, compact their information), they do produce more stepwise orientations and fewer complex orientations than expert writers do. *Language competence* cannot be completely excluded as a factor, however: Section 9.4.2 showed that for adequate use of individual adverbials a high language competence is necessary. With regard to process, no differences between native speakers and learners, nor between novice writers and expert writers, could be detected. Interestingly enough, the way stepwise and
Results of the experiment

complex beginnings generally came about may indicate that analysis of a complex beginnings as a functional whole may be a step into the right direction.

9.4.3 Writing tasks I-1 and II-2
The writing tasks resemble the writing process more than the previous two tasks did, but obvious differences remain, of course. Writing Task I is most closely associated to actual writing since subjects had to produce an entire paragraph. They did not have to collect the information to be presented in this paragraph, however, and consequently they did not have to make a selection as to what should and what should not be presented in the final text. Nevertheless, they had to be concerned with ordering information, and the means available to subjects for establishing relations between the various informational units were only limited by their own competence. Writing Task II is slightly further removed from the actual writing process, since subjects only had to produce the final sentence of a paragraph. Nevertheless, this task, too, does involve ordering and encoding of information, since subjects had to order the data they were provided with in such a way that the resulting sentence logically continued the flow of the preceding text.

The main questions with regard to these items are partly similar to the ones set for the Unscrambling Items: ‘do learners/novice writers construct as many complex beginnings as native speakers/expert writers do’ (question [4]), ‘do learners/novice writers construct as many stepwise and complex orientations as native speakers/expert writers do’ (question [5]), ‘do learners/novice writers produce complex beginnings in the same way as native speakers/expert writers do?’ (question [6]). Furthermore, since both sentences involve items in a context, again we can ask whether learners are as aware of TSCs as native speakers are (question [2]). Finally, this section will investigate question (7) - ‘can production of complex beginnings be associated with knowledge telling?’ - and (8) - ‘can stepwise orientations be associated with knowledge-telling while complex orientations are then rather associated with knowledge-transformation?’

In connection with these last two questions, notice that the Writing Items by their nature allow the subjects a wider range of solutions than Unscrambling Items. Because of this wider range, it will not do to simply categorize results as (1) containing a stepwise orientation, (2) containing
a complex orientation, and (3) other. While categories (1) and (2) are obviously maintained, category (3) needs fine-tuning. The reason for this is that one result in the blanket-category other may be a straightforward listing of the information the subject was provided with - i.e. knowledge-telling in nature - while another result may feature more sophisticated ways than a complex beginning to express relations between the various informational units - i.e. knowledge-transformational in nature.

The structure of this section differs slightly from the previous sections. First language competence, discourse competence and the interaction between the two will be investigated again. However, while all other questions are systematically examined in Section 9.4.3, questions 7 and 8 will only be dealt with in Section 9.4.4. Below we will first address the influence of the factor language competence.

Consider Writing Item II-2 again, repeated below in (17):

(17) Terrible as hurricanes and typhoons are, not all the consequences of these weather extremes are negative. In some rather arid regions the contribution of tropical cyclones to rainfall is crucial. <<20 to 50 percent of the annual rainfall is associated with tropical cyclones. This is an example. This is in Northwest Australia.>>

The categories for this item are as follows, with examples given in each case:

(18) a stepwise orientation [stepwise]
For example, in Northwest Australia, 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [DNN 63]

b complex orientation [complex]
In Northwest Australia, for example, 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [DNE 84]

c Example as subject [An example is]
An example is Northwest Australia, where 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [DNN 41]

d compacting: adverbial information integrated in one of the arguments
For example, 20 to 50 percent of the annual rainfall in Northwest Australia is associated with tropical cyclones. [ENE 27]
For example, tropical cyclones account for 20 to 50 percent of Northwest Australia’s annual rainfall. [ENE 50]

For example, tropical cyclones account for 20 to 50 percent of Northwest Australia’s annual rainfall. [ENE 50]

*Additive relation between sentence and preceding paragraph established in another way than complex beginning[other]*

In arid regions like Northwest Australia typhoons and hurricanes provide 20 to 50 percent of the annual rainfall and are therefore more valuable than one might expect. [DNE 12]

Look at Northwest Australia for an example where 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [DNN 84]

Northwest Australia is an example of this dependency, they receive 20 to 50 percent of their annual rainfall in the form of tropical cyclones. [ENN 32]

Northwest Australia is one place, among others, where 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [ENE 64]

*No additive relation established between sentence and preceding paragraph [no relation]*

In Northwest Australia 20 to 50 percent of the annual rainfall is associated with tropical cyclones. [ENN 53]

In dry areas they are almost an absolute necessity. [ENE 16]

With regard to questions (2) (‘Do learners produce more complex beginnings in general than native speakers do’) no such difference could be established: 68% of the native speakers produced a complex beginning (69 out of 101), versus 75% of the learners (86 out of 115). This difference is not significant ($\chi^2(1)=1.11$, $p=.292$). Table 9.23, furthermore, presents a more detailed overview of the results (not just complex beginning in general versus other, but all categories as listed under [18]). It is clear that learners do not produce more stepwise orientations than native speakers do for this item (question 5) and this item does therefore not support the observations resulting from the LEC-NEC comparison (the LEC contains more stepwise orientations than the NEC).

Furthermore, if we consider the construction processes that led to a stepwise orientation (see Table 9.24), we find no differences between learners and native speakers. However, for complex orientations the matter is different: learners generally produce this orientation by placing both adverbials sentence-initially and then move on to the rest of the
sentence (placement order: Representational, Rhetorical, Predication); native speakers more often begin writing the core sentence, including the initial satellite and insert the rhetorical satellite at a later point (In Table 9.24 under the category other): possibly, therefore, for native speakers the construction of a complex beginning is more of a conscious decision than it is for learners.8

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>complex</th>
<th>subject</th>
<th>compacting</th>
<th>other</th>
<th>no relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>native (n=101)</td>
<td>42</td>
<td>27</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>learner (n=115)</td>
<td>46</td>
<td>29</td>
<td>10</td>
<td>3</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

\[ \chi^2(5) = 6.52, \ p = .259, \ C = .17 \]

Table 9.23: Result sentences in Writing Item II-2 (scores are in percentages)

<table>
<thead>
<tr>
<th></th>
<th>stepwise orientation</th>
<th>Complex orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rhetorical, represent., predic.</td>
<td>represent., rhetorical, predic.</td>
</tr>
<tr>
<td>native (n = 31)</td>
<td>90</td>
<td>65</td>
</tr>
<tr>
<td>learner (n = 50)</td>
<td>94</td>
<td>97</td>
</tr>
</tbody>
</table>

\[ \chi^2(1) = .38, \ p = .539, \ C = .07 \]

\[ \chi^2(1) = 8.80, \ p = .003, \ C = .38 \]

Table 9.24: production processes for stepwise and complex orientations (scores are in percentages)

Finally, since opening with a rhetorical element is more likely to lead to a stepwise orientation than opening with another element, the elements with which the subjects started their construction process were compared. However, the two groups could not be distinguished from each other in this respect (58% of the native speaker, i.e. 44 out of 76, opened
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their construction process with a rhetorical element, versus 64% of the learners, i.e. 69 out of 107; \( \chi^2(2) = .927, p = .629 \).

This item also allows us to investigate to what extent learners are sensitive to TSCs in a productive task (question 2). In Section 9.3 we saw that ENE-subjects produce significantly more complex orientations in Writing Item II-2 than in Unscrambling Item 3. It was suggested that this may have been due to the fact that the Writing Item was embedded in a context with a spatial TSC (In some regions…..In Northwest Australia, for example). Now consider Tables 9.25a and 9.25b:

<table>
<thead>
<tr>
<th>Native Speakers (ENE/ENN)</th>
<th>Unscrambling Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>stepwise orientation</td>
</tr>
<tr>
<td>Writing Item II-2</td>
<td>stepwise orientation</td>
</tr>
<tr>
<td></td>
<td>complex orientation</td>
</tr>
</tbody>
</table>

McNemar-test for related samples: \( p = .031 \)

Table 9.25a: Position of for example in Writing Item II-2 (with context) and Unscrambling Item 3 (no context)

<table>
<thead>
<tr>
<th>Learners (DNE/DNN)</th>
<th>Unscrambling Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>stepwise orientation</td>
</tr>
<tr>
<td>Writing Item II-2</td>
<td>stepwise orientation</td>
</tr>
<tr>
<td></td>
<td>complex orientation</td>
</tr>
</tbody>
</table>

McNemar-test for related samples: \( p = .824 \)

Table 9.25b: Position of for example in Writing Item II-2 (with context) and Unscrambling Item 3 (no context)
Table 9.25a shows that 14 native speaker subjects (ENE + ENN) who had produced a stepwise orientation for Unscrambling Item 3 produced a complex orientation for Writing Item II-2. Only 4 produced a complex orientation for the Unscrambling Item while they produced a stepwise orientation for the Writing Item. Since the difference is significant, it suggests that the change from a stepwise orientation in Unscrambling Item 3 to a complex orientation in Writing Item II-2 is no coincidence. A likely reason for this change may then be the TSC in the context of Writing Item II-2. If we now consider Table 9.25b, we find no significant change in either direction. About as many learner subjects (DNE + DNN) changed from stepwise to complex (9) as from complex to stepwise (11). The choice of the orientation seems therefore more coincidental for learners. This, then, constitutes a tentative answer to question 2: in more productive tasks - which engage more cognitive resources than judgment and unscrambling tasks - learners seem less sensitive to TSCs that suggest a complex orientation than native speakers are.

Since we leave questions 7 and 8 for Section 9.4.4, we will now move on to the results of the task that most resembles the actual writing process: Writing Item I-1, on Henrietta Lacks’s cells being cloned. Again, for this task the categories stepwise orientation, complex orientation and other are not sufficient and results will be classified according to the categories complex beginning, although-clause, single contrastive conjunct/conjunctions, other (i.e. other means to express contrast than those meant in the other categories) and no relation (i.e. no explicit contrast between the different nature of Henrietta’s life and of her death is expressed). Note that so few complex beginnings were produced for this item that the categories stepwise orientation and complex orientation had to be summarized in one category. The main categories were already illustrated in examples (3) and (4) in Section 9.3.

The results for learners and native speakers are in Table 9.26. As the chi-squared test shows, learners and native speakers do tend to find different solutions for the writing task they were faced with. A tendency for learners to produce more complex beginnings than native speakers was identified in this item (10 vs. 4 complex beginnings, with n = 103 and n = 95 respectively), but the chi-square test’s significant result was mainly due to the fact that learners produced fewer solutions with an although-clause and many more in which no contrastive relation between Henrietta's ordinary life and her rather exciting death is expressed at all (no relation). This last finding supports the idea formulated in Chapter 7.
Results of the experiment

that it may be harder to combine main clause and sub-clause and express the rhetorical relations by means of elements such as although, despite, etc. rather than to produce two separate sentences and relate them with the help of a conjunct/conjunction or even express no contrast at all.

<table>
<thead>
<tr>
<th></th>
<th>complex beginning</th>
<th>although-clause (see 3a)</th>
<th>single contrastive conjunct/conjunction (see 3b)</th>
<th>other</th>
<th>no relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>native (n = 95)</td>
<td>4</td>
<td>44</td>
<td>19</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>learner (n = 103)</td>
<td>10</td>
<td>22</td>
<td>19</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

$\chi^2(4) = 14.71, p = .005$ and $C = .26$

Due to the low number of complex beginnings in this task, it is not possible to validate the hypothesis that learners produce fewer complex orientations and more stepwise orientations than native speakers do. Furthermore for the purposes of this study it is not useful to analyze the writing protocols of all result paragraphs. This section will therefore be limited to a qualitative analysis of the 14 complex beginnings in their context.

The 3 ENE-passages containing complex beginnings were already presented in 9.3.1. They all fit well in their contexts. The other passages are in (19)-(22) below. The complex beginnings are boxed again and the bold-faced elements signal the particular TSC in the passage. As is shown below, the ENN passage in (19), and the DNN and DNE passages in (20), all exhibit complex beginnings that fit well in their contexts. Notice by the way that the passage in (20b) is an example of a complex orientation that picks up the local connection of the sentence-final adverbial in the preceding sentence. As was mentioned already in 9.3.1, a stepwise orientation would have fit well in this paragraph as well.

The two examples in (21), both produced by Dutch students of English (DNN), are most interesting for this particular investigation. Both present a stepwise orientation in a context that suggests a complex
orientation, since both passages are structured according to a temporal TSC. The passage in (22), finally, is difficult to interpret. Although the subject did produce a contrast, it is not exactly clear how it should be interpreted: however seems to be intended to contrast the Lacks’ quiet life to her death, but as the passage is now, it seems as if after her death is contrasted with on the age of 31.

(19) Henrietta Lacks did not draw a lot of attention to herself during her life, however after dying of cancer at the age of 31, she achieved a curious form of immortality. Henrietta’s cells were .... [ENN 38]

(20) a Henrietta Lacks was born in Baltimore in 1920. When she was 31, she died of cancer. During her life, she did not draw a lot of attention during her life. After her death though, she achieved a curious form of immortality: her cells were .... [DNE 19]

b Henrietta Lacks was born in Baltimore in 1920. She died of cancer when she was 31. She did not draw a lot of attention to herself during her life, after her death, however, she achieved a curious form of immortality: her cells were .... [DNE 20]

c Henrietta Lacks was born in 1920 in Baltimore and when she died at the age of 31 of cancer, she had lived her life in obscurity. After her death though, she became quiet famous and in some way immortal. Her cells were .... [DNE 30]

d Henrietta Lacks was born in Baltimore in 1920 and died of cancer when she was 31. During her life, she did not draw a lot of attention to herself. After her death however, she achieved a curious form of immortality as her cells were .... [DNN 13]

e Henrietta Lacks, born in 1920 in Baltimore, did not draw a lot of attention to herself during her life. However, after her death, which was caused by cancer, at the age of 31 she achieved a curious form of immortality. This form of immortality was caused by the fact that her cells were .... [DNN 50]

f Henrietta Lacks was born in Baltimore in 1920. During her life she never drew a lot of attention to herself. After she died in 1951 though, she got a lot of attention in a rather curious way. In thousand of test tubes her cells lived on for years. [DNN 79]

(21) a Henriette Lacks was born in Baltimore in 1920. She died at the age of 31 of cancer. During her life she did not draw a lot of
attention to herself; however, after her death, she became immortal as her cells were the first to live on in thousands of test tubes all over the world. [DNE 34]

b Henrietta Lacks was born in Baltimore in 1920. When she was 31 she died of cancer. During her life she did not draw a lot of attention to herself. However after her death she achieved a curious form of immortality, as her cells were … [DNN 5]

c Henrietta Lacks was born in Baltimore in 1920. During her lifetime she was not very noticeable. However, after she died of cancer aged 31 she gained fame, because she was the first person whose … [DNN 63]

(22) Henrietta Lacks was born in Baltimore in 1920. She led a quiet life and on the age of 31 she died of cancer. After her death however she achieved a curious form of immortality. This was because her cells were the first to live on in thousands of test tubes around the world. [DNN 71]

In total we have four native speaker complex beginnings that all fit in their context and nine learner complex beginnings, six of which support the TSC and therefore fit in their context, one of which is ambiguous for other reasons and two that do not fit their context. While statistical laws again prohibit drawing any solid conclusions here, this is an indication that producing a complex beginning that fits well in its context is something that native speakers possibly carry out better than learners do.

In sum, above analyses have established that the influence of language competence on the production of complex beginnings is minimal: in the two writing tasks learners did not produce more complex beginnings in general, nor did they produce more stepwise orientations in particular. However, they did make less frequently use of adverbial contrastive clauses than native speakers did. Furthermore, when constructing their sentences learners did not start more frequently with a rhetorical element. The relevant differences that could be established is that native speakers, more than learners, construct a complex orientation by inserting the rhetorical adverbial at the very end of the construction process and that learners seem less sensitive to the TSC in the context of Writing Item II-2.

When the results are viewed from the perspective of discourse competence, however, the observations are rather more remarkable. In the
first place, for Writing Item II-2 novice writers are shown to produce fewer complex beginnings in general than expert writers do (60% of the novice writers produce a complex beginning, i.e. 55 out of 92, versus 81% of the expert writers, i.e. 100 out of 124; $\chi^2(1) = 11.34$, $p = .001$). This is contrary to the hypothesis, which predicts that novice writers produce more complex beginnings in general than expert speakers do (question 2). If we then consider Table 9.27a, we find that the underproduction of complex beginnings in general is mainly due to an underproduction of complex orientations in particular (question 3). This result replicates the observations resulting from the comparisons of the NEC and the LEC. When the construction processes in this item are investigated another hypothesis is supported: novice writers significantly more often begin their construction process with a rhetorical element. They also open significantly less with a representational element (Table 9.27b).

<table>
<thead>
<tr>
<th></th>
<th>stepwise</th>
<th>complex</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert</td>
<td>(n=124)</td>
<td>47</td>
<td>34</td>
</tr>
<tr>
<td>novice</td>
<td>(n=92)</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

$\chi^2(5) = 12.55, p = .002, C = .23$

Table 9.27a: Result sentences in Writing Item II-2 (scores are in percentages)

<table>
<thead>
<tr>
<th>sentence opening</th>
<th>rhetorical element</th>
<th>representational element</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert</td>
<td>(n=96)</td>
<td>58</td>
<td>39</td>
</tr>
<tr>
<td>novice</td>
<td>(n=87)</td>
<td>66</td>
<td>24</td>
</tr>
</tbody>
</table>

$\chi^2(2) = 6.98, p = .030 C = .19$

Table 9.27b: opening of construction processes for all results in Writing Item II-2 (scores are in percentages)
Furthermore, in answer to the context-questions, there are no indications that expert writers are more sensitive than novice writers to the spatial TSC in the context of Writing Item II-2: the McNemar test for changes between Unscramble Item 3 and Writing Item II-2 yielded $p=.152$ for expert writers and $p=.424$ for novice writers (see e.g. Tables 9.25a and 9.25b for an example of a McNemar text).

Finally, analysis of Writing Item I-1 (on Henrietta Lacks’s cells being cloned) shows that for this item no differences between expert writers and novice writers can be detected, neither with regard to complex beginnings nor with regard to other means of expression of contrast (Table 9.28). Apparently, expression of a contrastive relation by means of an although-clause in this item is a matter of language competence (see Table 9.26) rather than writing competence. The same goes for whether or not the contrastive relation is expressed at all (category no relation).

<table>
<thead>
<tr>
<th></th>
<th>complex beginning</th>
<th>although-clause (see 3a)</th>
<th>single contrastive conjunct /conjunction (see 3b)</th>
<th>other</th>
<th>no relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert</td>
<td>(n = 115)</td>
<td>6</td>
<td>33</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>novice</td>
<td>(n = 83)</td>
<td>8</td>
<td>33</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

$\chi^2(4)= .966, p = .573$ and C= .05

Table 9.28: Result Writing Item I-1 (scores are in percentages)

At this point we can move on to Question 2 again: do the complex beginnings produced in Writing Item I-1 fit in their textual context? To recapitulate, we had 14 complex beginnings in total for this item – presented under (18)-(21). The majority of those (11 in total) fit well in their context and the three that did not fit or were ambiguous were produced by subjects who were not only language learners but also novice writers (see examples [20b][20c] and [21]). We face the same
problem here as at the end of Section 9.4.3.1, however: the number of examples is too low to permit any conclusions. That makes it particularly interesting to test for the interaction between language competence and writing competence. However, as Table 9.29 shows, we find that for Writing Item II-2 no influence of the interaction between the two factors can be established. None of the groups produce more complex beginnings versus other elements (first row in Table 9.29), none have a preference for a particular type of solution (second row in Table 9.29) and none prefer beginning with one type of element over another (third row in Table 9.29). Writing Item I-1 cannot be tested statistically for the interaction between language competence and writing competence: the cell frequencies of the category complex beginnings are too low.

<table>
<thead>
<tr>
<th></th>
<th>difference with saturated model (Pearson's χ²)</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>complex beginnings vs. other</td>
<td>.06</td>
<td>1</td>
<td>.809</td>
</tr>
<tr>
<td>stepwise, complex, subject, integration, other, no relation</td>
<td>5.19</td>
<td>5</td>
<td>.393</td>
</tr>
<tr>
<td>opening word</td>
<td>1.60</td>
<td>2</td>
<td>.450</td>
</tr>
</tbody>
</table>

Table 9.29: results in Writing Item II-2

9.4.4 Knowledge telling and knowledge transformation
Throughout this section several suggestions have been made with regard to which constructions could be more associated with knowledge transformation processes and which might rather be the result of straightforward knowledge telling. The first two were formulated in the introduction to this section in Question 7 (are complex beginnings more associated with knowledge telling than other means to establish rhetorical relations) and Question 8 (are stepwise orientations more associated with knowledge telling than complex orientations). In the analyses in Section 9.4.3 one more suggestion was made, namely that a result sentence or result paragraph that did establish rhetorical relations (a contrast for
Writing Item I-1, and an example [or addition] for Writing Item II-2) also indicated more knowledge transformation than a paragraph which did no more than list information provided (categorized as no relation established).

This section will investigate all four of these suggestions. However, note that the most important means available to investigate knowledge transformation versus knowledge telling processes for this data is analysis of the editing moves in the protocols (see Bereiter and Scardamalia 1992). However, in the majority of the writing protocols no editing took place at all, and - for Writing Item I-1 - more than half of the editing moves that were identified were concerned with vocabulary changes rather than changes in the rhetorical structure of the text. A further reason to interpret the results with caution lies in the fact that the two writing tasks were still much removed from actual writing (the writing itself was isolated from its writing context - despite efforts to artificially provide such a context, as indicated in Chapter 8 - and subjects did not need to collect their own information, but were simply asked to process what they were provided with). Finally, and most importantly, there is a theoretical obstacle. According to Bereiter and Scardamalia's writing process theory the presence of editing moves (beyond correction of typing mistakes) is a characteristic of writing produced as a result of knowledge transformation processes - they are considered steps undertaken to solve the various rhetorical problems. Complete absence of editing moves indicates that the text producer mainly relied on knowledge telling procedures, that he was therefore not overtly concerned with rhetorical problems, and that as a result he is most likely a novice writer. However, as Schilperoord (1996) and Schilperoord and Sanders (1999) have pointed out, this is not an accurate representation of what expert writers do: expert writers may be so used to certain knowledge transformations that their – rather sophisticated – solutions for rhetorical problems are produced routinely – and are therefore not the result of pondering and editing anymore. Fewer editing moves in paragraphs produced by these types of writer suggests even more expertise, then. In this approach, a representation of the number of editing moves in novice and expert writing is U-shaped, rather than linear (see Figure 9.30). For this particular data set, however, no other means than analyzing editing moves are available. The results of this investigation should therefore be first and foremost considered as illustrations of the suggestions and as indications for further research.
When examining the writing protocols, the following characteristics will be looked for: (a) are there any editing moves at all? (b) if there are editing moves, do they concern changes that have to do with contrast (Writing Item I-1) or with the example status of the last sentence (Writing Item II-2)? (c) if there are editing moves that concern contrast or example status, do they change one type of construction into another (is a stepwise orientation changed into a complex orientation, for instance)? This last characteristic may suggest that the final construction required more transformation of knowledge than the original one. Questions 7 and 8 will be investigated last. We will start out with the other suggestion, namely if no rhetorical relation is established between the bits of information in a passage, then this may indicate less knowledge transformation and more knowledge telling. Consider for an overview of the editing moves in Writing Item 1-1 Table 9.31: (NB: in this table the results are not categorized for learners and native speakers or expert and novice writers). A number of conclusions can be drawn from these results. In the first place, it is simply not the case that the passages in which no contrast is expressed received less editing than other passages (in 14 passages no editing had taken place, while 15 was expected). However, if we look at the type of editing, then we do find a difference: subjects who produced 'no-relation'-results spent more energy on solving problems with regard to where to put all the information (9 out of 15 cases; see the protocol in [23] as an example) and on solving problems with regard to 'how to say something right' (vocabulary, phraseology, grammar) (6 out of 15 cases; see the protocol in [24a] as an example) than on establishing the
Results of the experiment

contrastive relation between Henrietta’s life and her death. Note how one of the few ENE-subjects in this last category may have ended up in the no-contrast group because she spent a considerable amount of energy on finding original vocabulary (i.e. vocabulary that was not literally handed to her in the instruction list), while most subjects simply made use of the items that were offered in the assignment itself. When this subject finally came round to adding the information about Henrietta’s life, she had only a few seconds left and no time to consider the rhetorical status of this information in relation to the rest of the text (see the protocol in [24b]).

<table>
<thead>
<tr>
<th>expression of contrast in Writing Item I-1 (all ‘process’-subjects)</th>
<th>no editing moves</th>
<th>editing moves involving contrast</th>
<th>other editing moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>complex beginning</td>
<td>(n=10)</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>although-clause (or similar)</td>
<td>(n=56)</td>
<td>55</td>
<td>21</td>
</tr>
<tr>
<td>single conjunct/conjunction (however, but, etc.)</td>
<td>(n=33)</td>
<td>58</td>
<td>15</td>
</tr>
<tr>
<td>other means to express contrast</td>
<td>(n=38)</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>no contrast expressed</td>
<td>(n=32)</td>
<td>44</td>
<td>9</td>
</tr>
</tbody>
</table>

\[ \chi^2(2)=6.98, \ p=0.030 \ C = .19 \]

Table 9.31: editing moves per result type in Writing Item I-1 (scores are in percentages)

(23) results writing assignment part I: dne82 –ITEM 1

Pause [20 units]
Typing Henriette Lacks was born in Baltimore in 1920. She was 31 when she died of cancer. [8 units]
Typing Henriette Lacks was born in Baltimore in 1920. She was 31 when she died of cancer. dur [.5 unit]
Henriette Lacks was born in Baltimore in 1920. She did not draw a lot of attention to herself during her life. She was 31 when she died of cancer. After her death she achieved a curious form of immortality: her cells were the first to live on in thousands of test tubes around the world.
Henrietta Lacks from Baltimore died when she was only 31. In itself not so special if it weren't for the fact that her cells were the first to live on in thousands of test tubes around the world. The in 1920 born Lacks didn't draw much attention to herself during her life.

Henrietta Lacks from Baltimore died when she was only 31. In itself not so special if it weren't for the fact that her cells were the first to live on in thousands of test tubes around the world. The in 1920 born Lacks died of cancer and didn't draw much attention to herself during her life.

Henrietta Lacks from Baltimore died this week when she was only 31. In itself not so special if it weren't for the fact that her cells were the first to live on in thousands of test tubes around the world. The in 1920 born Lacks died of cancer and didn't draw much attention to herself during her life.

Henrietta Lacks' cells has achieved an immortality unlike most. Born in Baltimore in 1920.
Henrietta Lacks has achieved an immortality unlike most. Born in Baltimore in 1920, she died of cancer in 1931. Her cells have been used to spawn thousands of research cells around the world. Her cells can still be found in laboratory test tubes cells around the world.
Unlike m. Born in Baltimore in 1920, Henrietta died of cancer in 1931 [1 unit]

Henrietta Lacks has achieved a unique immortality, her cells can still be found in thousands of cancer research laboratory test tubes cells around the world. Born in Baltimore in 1920, Henrietta died of cancer in 1931. During her life she was unexceptional [1 unit]

Most subjects that produced a paragraph in which no contrast relation was established were learners of English, both expert and novice writers. This confirms earlier research (i.e. Bereiter and Scardamalia 1992 and Mauranen 1996) that even expert writers need to spend so much energy on encoding in a second language that there is simply not enough left to monitor the text flow (see Tables 9.32a and 9.32b) (consider also learners’ less frequent production of although-clauses in Writing Item I-1). While there is no difference between expert writers and novice writers (Table 9.32b), learners do have a tendency to edit less than native speakers do (Table 9.32a), and when learners do edit they tend to concentrate on vocabulary rather than on connections between the sentences (with \( p=0.052 \) we can only speak of a tendency; the difference is not significant).
In conclusion, we cannot say that writers who did not express any contrast were less concerned with solving rhetorical problems than writers who did. However, we can say that they were concerned with rhetorical problems of a different level: they focused on vocabulary and 'where to put the information' rather than on expression of the relationships between the various bits of information.

This brings us to the suggestion formulated in Question 7: Do other ways of expressing the contrast in this item require more transformation of knowledge than a complex beginning? Again, transformation can only be identified to the extent that a writer made it explicit by editing moves. Consider Table 9.31 again in this respect. When a contrast is expressed either with the help of a single conjunct or conjunction or with the help of an although-clause, subjects did not need more editing moves involving this contrast than those who used a complex beginning. However, when
the contrast is expressed in yet other ways (the fourth category), subjects did produce more editing moves. Most of these other solutions came down to finding vocabulary that contrasted Henrietta's life to her death. Rather than using explicit contrastive constructions, these subjects chose to integrate the contrast in the representational elements of the sentence (compacting). In (25) an example of one such editing move in a protocol is given (the relevant editing moves are in bold-face). The passages in (26) give some more examples of expression of contrast by means of vocabulary.

(25) results writing assignment part I: dne66 –ITEM 1

```
Pause [1 unit]
Typing Henrietta Lacks who was born in Baltimore in 1920 and died of cancer when she was 31, achieved a curious form of immortality after her death [11 units]
Pause [2 units]
Typing Henrietta Lacks who was born in Baltimore in 1920. She and died of cancer when she was 31. This woman achieved a curious form of immortality after her death [1 unit]
Pause [1 unit]
Typing Henrietta Lacks who was born in Baltimore in 1920. She and died of cancer when she was 31. This woman achieved a curious form of immortality after her death [1 unit]
Pause [3 units]
Typing Henrietta Lacks who was born in Baltimore in 1920 and died of cancer when she was 31. This woman achieved a curious form of immortality after her death. Her cells were the first to live on in thousands of test tubes around the world. The [6 units]
Pause [3 units]
Typing Henrietta Lacks who was born in Baltimore in 1920 and died of cancer when she was 31. This woman achieved a curious form of immortality after her death. The more remarkable because she did not draw a lot of attention to herself during her life. Her cells were the first to live on in thousands of test tubes around the world. The [7 units]
```
Henrietta Lacks who was born in Baltimore in 1920 and died of cancer when she was 31. This woman achieved a curious form of immortality after her death. All the more remarkable because she did not draw a lot of attention to herself during her life. Her cells were the first to live on in thousands of test tubes around the world.

In 1951 an otherwise unremarkable woman died of cancer. Her name was Henrietta Lacks and she was born in Baltimore. After her death her cells were used in thousands of test tubes around the world, giving Henrietta a curious form of immortality. (ENE 19)

Henrietta Lacks was born in Baltimore in 1920. After a quiet life, she died in 1931 of cancer. Despite her death, she achieved a strange form of immortality; her cancerous cells live on in laboratories around the world. (ENE 21)

Henrietta Lacks, born in Baltimore in 1920, achieved a curious form of immortality after her death from cancer in 1951. This quiet, unassuming woman's cells were to live on in thousands of test tubes around the world. (ENE 82)

Henrietta Lacks, born in Baltimore in 1920, died of cancer at the age of 31. Not drawing a lot of attention to herself during her life, she achieved a curious form of immortality after her death because her cells were the first to live on in thousands of test tubes around the world. (DNE 7)

According to Table 9.32, it may be the case that expressing a rhetorical relationship (in this case: a contrastive rhetorical relationship) with the help of representational elements requires more cognitive energy than the
production of a complex beginning. This in itself makes sense of course: for each situation appropriate vocabulary needs to be found, while the fairly limited set of contrastive conjuncts that make up part of a complex beginning is readily available. There were, however, no examples in which a subject first produced a complex beginning and then later chose to express the contrast with the help of vocabulary.

At this point we can turn to the final suggestion in question (8): Can production of stepwise orientations be associated with knowledge-telling processes and production of complex orientations with knowledge-transformation processes. The evidence is not conclusive. On the one hand, for Writing Item I we have no examples of protocols in which a complex orientation is considered and then a stepwise orientation is submitted. On the other hand, for Writing Item II-2, we have two examples of subjects who changed their stepwise orientation into a complex orientation, but we also have Subject DNN 79, who produced halfway his writing process a complex orientation \textit{(In Northwest Australia for example, 20 to 50 percent of the annual rainfall is associated with tropical cyclones)}, but after some consideration changed it into a stepwise orientation \textit{(For example, in Northwest Australia 20 to 50 percent of the annual rainfall is associated with tropical cyclones)}. The sentence containing the stepwise orientation is the one he submitted as his final result. In order to investigate question (8) new data would need to be collected.

In conclusion, taking all results for Writing Item II-2 into account it seems fair to say that for this item:

- Language learners do not produce more complex beginnings than native speakers do.
- Language learners do not produce more stepwise orientations than native speakers do.
- It is possible that language learners are less sensitive to the TSC in the context of this item
- Learners produce their complex orientations differently than native speakers do. Learners first place their adverbials and then concentrate on the rest of the sentence. Native speakers more often choose to construct a sentence including an initial adverbial and then insert the rhetorical adverbial at a later stage.
Furthermore, we can say that for this item:

- Novice writers produced fewer complex beginnings than expert writers do and this is mainly due to the fact that novice writers produced fewer complex orientations.
- There is no indication for this item that novice writers are less sensitive to the TSC in the context than expert writers.
- Novice writers begin writing their sentence less frequently with a representational element and more often with a rhetorical element.

Taking all results for Writing Item I-1 into account it is fair to say that for this item:

- Learners possibly produce more complex beginnings than native speakers do.
- Learners produce more passages in which no contrast is expressed.
- Learners tend to make more editing moves that are rather concerned with 'how to say something right' and 'where to put the information' than with establishing links between the various bits of information.

Furthermore, we can say that for this item:

- There is no difference in the type of solutions expert writers and novice writers produce.
- There is no difference in editing moves between expert writers and novice writers.

Finally, as far as the suggestions with regard to writing processes go, we found:

- No support for the idea that subjects who did not express any contrast in Writing Item I-1 were less concerned with solving rhetorical problems than writers who did express this contrast. However, it seems that they were concerned with rhetorical problems of a different level.
- Ambiguous support for the idea that a complex beginning is an 'easier' way to express rhetorical relations than other means to express such relations.
- No real support for the idea that a complex orientation is harder to produce than a stepwise orientation;

Finally, no influence for the interaction between language competence and writing competence could be detected for Writing Item II-2. For Writing Item I-1 this could not be tested.
9.4.5 Concluding remarks
The previous subsections have systematically examined all stepwise/complex items. The main goal of each section was to examine whether observations resulting from the LEC/NEC comparison could be replicated with this experiment and to establish whether differences between LEC/NEC may be due to different levels of language competence, different levels of generalized discourse competence/writing experience, or different levels of language-specific writing competence. To this end eight questions were formulated, and having considered all of them from various angles throughout the above examinations, it is now time to attempt to find patterns in the data collected so far.

(1) Do language learners/novice writers know that complex orientations are grammatically acceptable in English
According to the results of the judgment tasks, it is safe to say that both learners and novice writers generally know that complex orientations are grammatically acceptable. The suggestion that learners underproduce complex orientations on account of their not being familiar with the construction can therefore be abandoned.

(2) Are language learners/novice writers aware of TSCs in English passages?
Here we find an interesting pattern for language learners: while they are as aware of TSCs as native speakers are in the judgment task, their sensitivity seems to diminish when the task they are faced with becomes more complicated. Very cautiously, it may be suggested therefore that learners are aware of TSCs, as long as the task they are to carry out leaves them with enough cognitive resources to spend energy on text flow. This will definitely need to be tested more extensively, however. A similar suggestion goes for novice writers versus expert writers.

(3) Are language learners/novice writers as aware of TSCs as native speakers/expert writers are?
Again, for learners a pattern could be identified connected to the complexity of the task. While their awareness of the TSC hardly differed from native speaker awareness in the Judgment Task, they displayed less awareness in the two Writing Items. For Writing Item II-2 this could be established statistically. For Writing Item I-1, it is
only suggested by the fact that it was learners who produced two complex beginnings that did not display the most effective textual fit. More importantly, however, learners produced more paragraphs for this item in which no rhetorical relation was established, which, if not less awareness, at least indicates less concern with the text flow of that paragraph (possibly because the subjects were pre-occupied with other aspects of the writing task).

For novice writers the pattern is different: both in the Judgment Task and in the Writing Task they displayed as much (Judgment Task) or as little (Writing Task II-2) awareness of the TSC as expert writers did. It is especially interesting that not only the novice writers, but the expert writers, too, did not display any preference for a complex orientation in Writing Item II-2. This may be because about half of the expert writers are also language learners. For Writing Item I-1, the two non-fitting complex beginnings were indeed produced by novice writers, but, as indicated before, these subjects were also language learners. More importantly, novice writers did not produce more paragraphs in which no relation was established than expert writers did for this item. For now it seems, therefore, that a lower degree of awareness of TSCs in English is due to language competence rather than writing competence. In support of the discourse competence hypothesis in Chapter 7, no effects of language-specific discourse competence could be established.

(4) Do language learners/novice writers produce as many complex beginnings in general as native speakers do?

Learners do not seem to produce more complex beginnings than native speakers do, for any of the tasks. For novice writers versus expert writers the results are more interesting. While novice writers produce as many complex beginnings in general as expert writers do for the Unscrambling task, in Writing Task II they produced significantly fewer complex beginnings than expert writers. Later it was found that this difference was mainly due to an underproduction of complex orientations (which was to be expected) rather than an underproduction of stepwise orientations (which would have been surprising). Finally, no difference whatsoever was found between novice writers and expert writers for Writing Task I.

In conclusion, the hypothesis that non-experienced writers, who are non-native speakers of English, produce more complex
Results of the experiment

beginnings could not be confirmed as such. Therefore, it was not possible to determine unambiguously whether the difference that was found in the corpus analysis is due to language competence or to writing competence.

(5) Do language learners/novice writers produce as many stepwise orientation and complex orientations as native speakers do?

For Unscrambling Item 3 and Unscrambling Item 5, learners produced roughly as many stepwise and complex orientations as native speakers did. Due to the specific nature of Unscrambling Item 7 (which involves the rhetorical adverbial moreover), learners produced significantly fewer stepwise orientations for this item than native speakers did. Furthermore, for Writing Item II, learners did not produce more stepwise orientations than native speakers did, nor did they produce fewer complex orientations than native speakers. For Writing Item I, no tests could be carried out.

If we compare the number of stepwise and complex orientations produced by novice writers versus production of stepwise and complex orientation by expert writers in the Unscrambling Task, we find that (except for Unscrambling Item 7 again), novice writers produce fewer complex orientations and more stepwise orientations than expert writers do. For Writing Item II, novice writers also produce fewer complex orientation than expert writers. For Writing Item I, no tests could be carried out. The outcomes of the Unscrambling Tasks and Writing Item II lead to the idea that the differences in stepwise orientations and complex orientations between the NEC and the LEC are due to writing competence rather than to language competence.

(6) Do language learners/novice writers start their sentences with a rhetorical adverbial, and then focus on the core of the message in the main clause (see Chapter 7)?

For the Unscrambling Items, language users in general first build their complex beginning (whether stepwise [placement order: Rhetorical, Representational, Predication] or complex [placement order: Representational, Rhetorical, Predication]) and then focused on the rest of their sentence. In a minority of the cases they build their sentence – starting with the representational adverbial – and then placed the rhetorical adverbial as a last move (placement order:
Representational, Predication, Rhetorical). Only a few subjects chose yet other ways (i.e. place adverbials halfway through building their sentence, etc.). And while in the majority of the cases a stepwise orientation is the result of placement Rhetorical, Representational, Predication, for the Unscrambling Task, it could not be shown that learners more often than native speakers adhere to this order. Neither could such a difference be shown for novice writers versus expert writers. These processes indicate that a complex beginning can possibly be seen as a cognitive whole, i.e. a functional unit, which supports the idea of analyzing them as such, rather than as consisting of two functional parts. This is also supported by the process detected in the writing process of Writing Item II-2, where by far the majority of the complex beginnings came about as a result of placement order Rhetorical, Representational, Predication for a stepwise orientation or as a result of placement order Representational, Rhetorical, Predication for a complex orientation. If in another experiment it were to be shown that subjects pause between producing a complex beginning and producing the rest of the sentence (or between reading the complex beginnings and reading the rest of the sentence), this suggestion seems even more likely.

(7) Can production of complex beginnings be associated with knowledge telling (see Chapter 7)?

The presupposition behind this question is that expression of rhetorical relationships is most easily done with the help of explicit markers: however, for example, etc. As soon as those elements are used the likelihood of construction of a complex beginning increases. However, when a subject chooses to express a rhetorical relationship with the help of vocabulary that conveys the rhetorical relationship between two information units (i.e. inconspicuous life versus remarkable death, or unassuming life versus curious death), this may cost more energy. If the energy cost can be operationalized as the number of editing moves that is used to create the relationship, then the data indicate that rhetorical relationships are indeed more easily conveyed with the help of complex beginnings than with the help of vocabulary: subjects edited the results passages with complex beginnings less frequently. Whether the presence of these extra editing moves indeed reflects knowledge transformation processes is of course another matter.
(8) Can production of stepwise orientations be associated with knowledge-telling processes while production of complex orientations is associated with knowledge-transformation processes? (see Chapter 7)

The presupposition behind this question is that expression of rhetorical relationships is most easily done with the help of a stepwise orientation instead of a complex orientation. A stepwise orientation allows the language user to establish a quick link and then add the core sentence as an unanalyzed whole (as a matter of speaking). When producing a complex orientation, however, the language user needs to select one element of the core sentence that is to carry the rhetorical relationship (i.e. the spatial element in In Britain, however, things are different). Unfortunately, the evidence collected in this experiment is inconclusive with regard to this question: subjects changed stepwise orientations into complex orientations, but they also changed complex orientations into stepwise orientations. Based on the current data, therefore, this question cannot be answered.

9.5 Orientational clashes

With regard to orientational clashes and composite orientations, Chapter 6 observed that first and second year learners of English produce fewer composite orientations than native speakers of English do. Furthermore, it was suspected that first and second year learners produce more orientational clashes than native speakers of English do. The main question resulting from this observation is again: Are these differences due to the fact that (a) the LEC-writers are language-learners, (b) the LEC-writers are novice writers, (c) the LEC-writers are both language learners and novice writers. Therefore, in the following sections DNE and DNN results will be compared to ENE and ENN results to determine the influence of language competence, and DNE and ENE results will be compared to DNN and ENN results to determine the influence of discourse competence/writing experience. Also the interaction between the two parameters will be examined (language-specific discourse competence). With regard to orientational clashes and composite orientations, the following set of questions is relevant:

(1) Do language learners/novice writers know that orientational clashes are problematic in English?
(2) Are language learners/novice writers as aware of the problematic nature of orientational clashes as native speakers/expert writers are?

(3) Do language learners/novice writers produce more orientational clashes as native speakers/expert writers do?

(4) Do language learners/novice writers produce as many composite orientations as native speakers/expert writers do?

(5) Do language learners/novice writers have a larger chance at producing an orientational clash, because they are less likely to make use of compacting mechanisms (see Chapter 7)?

Sections 9.5.1-9.5.3 will respectively investigate Judgment Items 2 and 3, Writing Item II-3 and Writing Item I-2 in order to attempt to answer these questions. Section 9.5.4 will summarize.

9.5.1 Judgment Items 2 and 3

The Judgment Items were designed to find out (1) whether learners/novice writers know that orientational clashes are problematic in English, and (2) whether they are as aware of the problematic nature of orientational clashes as native speakers/expert writers are.

Note that for this task subjects were asked to judge three related sentences. When confronted with a set of sentences that only differ with regard to the way the adverbials are organized, they may start comparing and change previous judgments. The acceptability of each orientational clash-sentence is therefore measured at two points: the original judgment (that is: the judgment that was made when the subject is first confronted with the sentence) and the final judgment (that is, the judgment that was submitted). The original and final judgments were compared and a record was made of how many times a subject changed her judgment.

Consider first Judgment Item 2, presented in (27) below. This sentence in (27a) contains the orientational clash and it is this sentence we will concentrate on for this analysis.

(27) a In the United States, by the early Sixties TV had been hijacked by its sponsors and turned into another advertising medium.

b By the early Sixties, TV in the United States had been hijacked by its sponsors and turned into another advertising medium.

c In the United States by the early Sixties, TV had been hijacked by its sponsors and turned into another advertising medium.
If learners’ production of orientational clashes can be explained by the fact that they are not aware that these sentence openings are problematic, they should generally judge a sentence containing such a clash as *acceptable*. Furthermore, if they are less aware of the problematic nature than native speakers are, they should judge this sentence significantly more often as *acceptable* than native speakers do. However, with 69% judging the orientional clash as either doubtful or unacceptable (74 out of 107), learners significantly more often than not suspect something fishy about this sentence ($\chi^2(1)=15.71$, $p<.001$). Furthermore, with 67% of the native speakers making the same judgment (55 out 81) there is no significant difference between native learners judgments ($\chi^2(1)=.03$, $p=.854$, $C = .01$). There was also no indication that learners had more doubts about this sentence than native speakers did: only 17 learners changed their judgment of this sentence versus 7 native speakers ($\chi^2(1)=1.07$, $p=.302$). Not many changes were made, but as Table 9.33 shows, the majority of the changes in judgment that were made are negative; that is *acceptable* is changed to *doubtful*, and *unacceptable* or *doubtful* is changed to *unacceptable*. This indicates that for some subjects recognition of an orientational clash may require some time. (In the table *n*” stands for the sample size corrected for ties)

<table>
<thead>
<tr>
<th>Judgment</th>
<th>Native</th>
<th>Learner</th>
<th>Whole group</th>
</tr>
</thead>
<tbody>
<tr>
<td>original judgment &lt; final judgment</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>original judgment &gt; final judgment</td>
<td>7</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Ties</td>
<td>74</td>
<td>90</td>
<td>164</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>81</td>
<td>107</td>
<td>188</td>
</tr>
</tbody>
</table>

**Sign Test**

- $n^*=7$, $a=7$, $p<.001$
- $n^*=17$, $a=13$, $p<.001$
- $n^*=24$, $a=20$, $p<.001$

*Table 9.33: in-group comparison of original and final judgment of sentence a (orientational clash)*
Now consider the results for Judgment Item III in (28). Sentence \textit{a} contains an orientational clash:

(28) a Of the nine situations that were presented, in three situations people would consider not using their car.

b In three out of the nine situations that were presented, people would consider not using their car.

c Of the nine situations that were presented, people would consider not using their car in only three.

Again, if learners’ production of orientational clashes can be explained by the fact that they are not aware that these sentence openings are problematic, they should judge sentence \textit{a} more frequently as \textit{acceptable} than as \textit{doubtful} or \textit{unacceptable}. Furthermore, if they are less aware of the problem than native speakers are, they should judge this sentence significantly more often as \textit{acceptable} than native speakers do. It is not the case that the majority of the learners think that the sentence is \textit{acceptable} (47% find the sentence opening \textit{acceptable} versus 54% who find the sentence opening \textit{doubtful} or \textit{unacceptable}; $\chi^2(1)=.47$, $p=.459$). However, when first confronted with it learners do tend to find this sentence less problematic than native speakers do: only 31% of the native speakers, 19 out of 61, judge this sentence as \textit{acceptable} ($\chi^2(1)=3.84$, $p=.050$, $C=.15$). Interestingly enough, for the final judgment the difference between native speakers and learners is not significant anymore ($\chi^2(1)=3.50$, $p=.061$, $C=.14$). Apparently, the extra time used for consideration was the cause of this difference. For this item, too, the majority of the changes that learners made were negative; that is, the final judgment of the sentence is worse than the original judgment (\textit{acceptable} is changed to \textit{doubtful} or \textit{unacceptable}, and \textit{doubtful} is changed to \textit{unacceptable}) ($Z=2.35$, $p=.019$). As was the case for Judgment Item 2, this indicates that, especially for language learners, recognition of an orientational clash requires some time to re-think the sentence.

In conclusion, both for Item 2 and for Item 3 a significant number of learners changed their judgment of the orientational clash after some time and/or after being confronted with sentences that only differed from the orientational clash sentence with respect to the organization of the initial adverbials. This opportunity to compare may have focused the learners'
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attention on this sentence opening. This means that learners do recognize an orientational clash, but that they need some time and/or that they need their attention to be directed to it before they do. It is possible that while carrying out a task as complicated as essay writing it is precisely time and focus that these subjects lack, simply because they are busy dealing with the other aspects of text writing.

The factor writing competence can be easily dispensed with for this item: for none of the comparisons significant differences between novice writers and expert writers could be established: they made similar judgments for the orientational clash in Judgment Item 2 (original judgment: $\chi^2(1)=.30$, $p=.281$; final judgment [i.e. after subjects had time to change their original judgments] $\chi^2(1)=.01$, $p=.908$) and for the orientational clash in Judgment Item 3 (original judgment: $\chi^2(1)=.46$, $p=.499$) and they did not need more judgments than native speakers did ($\chi^2(1)=.05$, $p=.836$ and $\chi^2(1)=.26$, $p=.609$ for Item 2 and 3 respectively).

So far, analysis of the result for Item II as well as for Item III revealed an influence with regard to language competence but none with regard to writing competence. To analyze the influence of language-specific discourse competence, the same procedure as before will be followed: with the help of a loglinear Logit analysis, the goodness-of-fit of a saturated model is compared to the goodness-of-fit of a model in which the factor language competence X general writing competence is filtered out. The difference between the two models then represents the influence of this factor. As is clear from Tables 9.34a and 9.34b only for the final judgment of the orientational clash in Item III was a significant difference detected. Closer examination revealed that the difference between Dutch expert writers and Dutch novice writers is greater than the differences between English expert writers and English novice writers. Interestingly enough, it is in fact the Dutch expert writers who judge the orientational clash more often to be acceptable than the Dutch novice writers. At this point I have no explanation for this outcome.
<table>
<thead>
<tr>
<th></th>
<th>difference with saturated model (Pearson's $\chi^2$)</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>original judgment</td>
<td>.735</td>
<td>1</td>
<td>.391</td>
</tr>
<tr>
<td>final judgment</td>
<td>.000</td>
<td>1</td>
<td>.994</td>
</tr>
</tbody>
</table>

Table 9.34a: results Judgment Item II

<table>
<thead>
<tr>
<th></th>
<th>difference with saturated model (Pearson's $\chi^2$)</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>original judgment</td>
<td>3.26</td>
<td>1</td>
<td>.071</td>
</tr>
<tr>
<td>final judgment</td>
<td>8.33</td>
<td>1</td>
<td>.004</td>
</tr>
</tbody>
</table>

Table 9.34b: results Judgment Item III

In conclusion it seems fair to say that learners do recognize that orientational clashes present a problem and that they are as good at this as native speakers are. It does seem, however, that they need either extra time or a direction of their attention to the problematic area. This is especially clear when Item 3 is considered, which revealed a significant difference between original judgments of learners and native speakers, but not between their final judgments (notice by the way that this difference could only be revealed because of the process character of this experiment). Furthermore, it seems safe to say that recognition of orientational clashes is a matter of language competence rather than writing competence.

9.5.2 Writing Item II-3

The main questions with regard to Writing Item II-3 are questions (3)-(5): Do language learners/novice writers produce more orientational clashes than native speakers/expert writers do?; Do they produce as many composite orientations as native speakers/expert writers do?; and Do they have a larger chance of producing an orientational clash, because they are less inclined to make use of compacting? For the same reasons as mentioned in connection with the writing items that were discussed in Section 9.4.3, we will need an extended set of result classes. First consider, therefore, the item itself in (29) and the result classes in (30)
(notice by the way that due to this high number of classes, it is not possible to examine the interaction between the parameters language competence and discourse competence/writing experience for this item: the result tables simply yield many cells with a low frequency).

(29) In a true democracy there is freedom of speech, which enables every citizen to utter his or her dissatisfaction with governmental decisions. Literally every person has the right to go into politics and have some influence on the way he or she is governed. 

<<The situation was very different. This was in Russia. This was until recently.>>

(30) a orientational clash
In Russia, until recently the situation was very different.
Until recently, in Russia the situation was very different.
However, in Russia, until very recently the situation was very different.
Until recently, however, in Russia the situation was very different.

b composite orientation
Until recently in Russia, the situation was very different.
In Russia until recently, the situation was very different.
Until recently in Russia, however, the situation was very different.
However, until recently in Russia the situation was very different.

c compacting: integration in Subject
Until recently, the situation in Russia was very different.
Until recently the situation in Russia was very different.
Until recently, however, the situation in Russia was very different.
The situation in Russia was until recently very different.
The situation in Russia was very different until recently.

d brace
Until recently, the situation was very different in Russia.
In Russia, the situation was very different until recently.
However, until recently this situation was very different in Russia.
In Russia however the situation was very different until recently.
Until recently, however, the situation was very different in Russia.

e  *end cluster*

The situation was very different in Russia until recently.
The situation was very different until recently in Russia.

f  *grounded*

In Russia, until recently, the situation was very different.
Until recently, in Russia, the situation was very different.

g  *Double Dutch*

Until recently was the situation in Russia very different.
In Russia was the situation until recently very different.

h  *other*

The citizens have now the right to speak and write, still they don't dare to use this right. [DNE 5]
In theory this may work, but in an ever changing society one has to take caution before using one's speech freedom, especially here. [DNE 16]
Russia's situation differed until recently. [ENN 40]
In Russia, the situation was very different--that is, until recently.

In the Tables categories *d-g* are summarized as 'two separate adverbials'.

Consider Table 9.35, which compares learner results of Writing Item II-3 with native speaker results. Too few orientational clashes were produced to be able to say anything about whether or not learners produce more clashes than native speakers (question 3). In itself it is interesting that native speakers do produce clashes at all. However, native speakers do produce more composite orientations than learners do (question 4). Furthermore, based on these results it is not possible to say that learners less frequently integrate their adverbial information in the Subject NP (compacting). On the contrary, according to these results they choose this option far more often than native speakers do, while at the same time they equally often choose for a solution in which the circumstantial information is presented in the form of two separate adverbials (question 5).
If we now consider the results from the perspective of *discourse competence/writing experience*, we find that the differences between expert writers and novice writers are not significant (see Table 9.36). In combination with the results in Table 9.35 (that do show a difference between production of composite orientations in learner and native English) indicates that with regard to composite orientations the difference between the LEC and the NEC is caused by the different language backgrounds of the writers rather than differences in discourse competence/writing experience. Note, by the way, that expert writers do tend to make use of the integration option more than novice writers do, while novice writers tend to make more use of the double adverbial construction (whether they are clustered sentence-finally, or whether the two adverbials brace the core sentence) than expert writers. It will be interesting to see whether there is still no difference to be observed between expert writers and novice writers when the task becomes yet more complicated, as is the case for Writing Item I-2, to be discussed in the next sub-section.

Table 9.35: Result sentences in Writing Item II-3 (scores are in percentages)

<table>
<thead>
<tr>
<th></th>
<th>clash</th>
<th>composite</th>
<th>compacting</th>
<th>two adverbials.</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>native (n=98)</td>
<td>5</td>
<td>12</td>
<td>29</td>
<td>49</td>
<td>5</td>
</tr>
<tr>
<td>learner (n=113)</td>
<td>2</td>
<td>1</td>
<td>50</td>
<td>42</td>
<td>5</td>
</tr>
</tbody>
</table>

\[\chi^2(4)=19.05, \ p=.001, \ C=.29\]  

Table 9.36: Result sentences in Writing Item II-3 (scores are in percentages)

<table>
<thead>
<tr>
<th></th>
<th>clash</th>
<th>composite</th>
<th>compacting</th>
<th>two adverbials.</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert (n=120)</td>
<td>5</td>
<td>7</td>
<td>46</td>
<td>38</td>
<td>5</td>
</tr>
<tr>
<td>novice (n=91)</td>
<td>1</td>
<td>5</td>
<td>32</td>
<td>56</td>
<td>5</td>
</tr>
</tbody>
</table>

\[\chi^2(4)=8.96, \ p=.062, \ C=.20\]
In sum, due to the low number of orientational clashes that were produced, it was impossible to say whether learners or novice writers indeed produce more orientational clashes than native speakers do (as was indicated by the LEC-NEC comparison). However, it was possible to establish that native speakers produce more composite orientations than learners do (this observation supports the outcome of the contrastive corpus analysis). No such differences could be established for expert writers versus novice writers. Finally, it was not possible to establish that native speakers more than learners make use of compacting. However, there was a tendency for expert writers tend to make more use of compacting than novice writers (see the examples in [29c]).

9.5.3 Writing Item I-2
The main questions with regard to this item are similar to the questions asked for Writing Item II-3, namely questions (3)-(5): Do language learners/novice writers produce more orientational clashes than native speakers/expert writers do?; Do they produce as many composite orientations as native speakers/expert writers do?; and Do they have a larger chance of producing an orientational clash, because they are less inclined to make use of compacting? Furthermore, as was the case for the previous item, we need to establish the categories according to which the result paragraphs are classified (and again this multiplication of categories prevents testing for the interaction between language competence and discourse competence/writing experience). Basically, these categories are identical to the ones defined for Writing Item II-3. First, consider therefore the item itself in (31) and the categories according to which the results are classified in (32):14

(31)  Using all the information below, write at most four sentences relating the following event which serves as an example of patients misbehaving in a hospital. The story is part of a doctor's call for new values.
- a patient had taken XTC
- this took place last week
- this took place in the E.R.
- she had a bad trip
- she wrecked a room
- she spat at everyone who came near
- I suggested she'd be prosecuted for the costs
- My colleagues considered that heartless
- they felt you don't prosecute when it is clear one cannot be
  held responsible for one's actions.

(32) a  orientational clash
  Last week, in the ER a patient …; In the ER, last week a
  patient…
  b  composite orientation
  In the ER last week, a patient…; Last week in the ER, a patient…
  In the ER last week a patient…; Last week in the ER a patient…
  c  Integration in NP (compacting)
  Last week, an ER patient …; Last week, a patient in the ER …
  Last week, a patient…a room in the ER; Last week, a patient….an ER room
  d  Brace
  Last week a patient…… in the ER; In the ER, a patient…..last week
  e  end cluster
  A patient…..in the ER last week; A patient…..last week in the ER
  f  grounded
  Last week, in the ER, a patient….; In the ER, last week, a
  patient…
  g  incomplete (i.e. subject did not use all information).
  Last week, a patient…..; In the ER, a patient….
  h  other
  Last week a patient on XTC had a bad trip. In the E.R., after
  wrecking a room and spitting at everyone who came near. [DNE
  6]

In the Tables, categories (a) and (d)-(f) are summarized as 'two separate
adverbials', while categories (g)-(h) are summarized as other. That
category (a) contained too few instances to maintain it as a separate class
is especially unfortunate, since Writing Item I-2 was designed to test
production and use of composite orientations as well as production and
use of orientational clashes. However, since only 4 instances of
orientational clashes were produced in total (2 by native speakers, and 2
by language learners) (see the passages in [33] and [34]), no statistical analyses are possible and therefore question (3) (‘Do learners/novice writers produce more orientational clashes than native speakers/expert writers’) cannot be answered for this item.

(33) a Last week, in the E.R. there was a patient who had a bad trip after taking XTC. She had wrecked a room and spat at everyone who came near. I suggested she’d be prosecuted for the costs. My colleagues however considered that heartless: they felt you don't prosecute when it is clear one cannot be held responsible for one's actions. [DNE 11]

b Last week, in the ER a patient took XTC and had a bad trip. She wrecked a room and spat at everyone who came near. I suggested she'd be prosecuted for the costs, but my colleagues considered that heartless. They felt you don't prosecute when it is clear one cannot be held responsible for one's actions. [DNE 78]

(34) a Last week, in the ER room we had a patient who had taken XTC. She had had a bad trip and she had wrecked a room, spitting at everyone who came near her. I suggested she be prosecuted for the costs, but my colleagues considered that heartless; they felt you don't prosecute when it is clear one cannot be held responsible for one's actions. [ENE 38]

b Last week, in an E.R. a patient took XTC. She wrecked in a room, on a bad trip; spitting at everyone who came near. She was suggested to be prose, but she couldn't be held accountable for her actions. The colleagues were considered heartless. [ENN 7]

None of these subjects spent a lot of time on their paragraph openings and no editing moves concerning the sentence-initial area were recorded. In fact, the English subjects did not edit at all. The two Dutch subjects spent considerable time on grammar and text flow issues (changes from a patient had a bad trip to there was a patient who had a bad trip and, etc.).

To answer questions 4 (with regard to composite orientations) and 5 (with regard to compacting) consider the results in Table 9.37:
Results of the experiment

No significant differences between learners and native speakers could be detected. However, notice that there is a tendency for learners to produce fewer composite orientations than native speakers do, as was hypothesized based on the results of the NEC/LEC comparison. This constitutes a tentative answer to question 4. With regard to question 5, however, it is not possible to establish a difference in tendency to integrate circumstantial information in an NP, nor is it possible to establish a tendency for learners to express the circumstantial information in two separate adverbials. This means that for the preference to compact or not, language competence cannot be identified as a factor.

Remember that for the sections on complex and stepwise orientations we found that learners edited more than native speakers did. A similar exercise for this item yields no result, however:

<table>
<thead>
<tr>
<th></th>
<th>no editing</th>
<th>editing involved expression of Time and Place in initial area</th>
<th>other editing moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>native (n=66)</td>
<td>33</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>learner (n=100)</td>
<td>42</td>
<td>29</td>
<td>29</td>
</tr>
</tbody>
</table>

$x^2(2)=1.47, p = .479, C = .09$

Table 9.38: Result sentences in Writing Item I-2 (scores are in percentages)

When the item is considered from the perspective of discourse competence/writing experience, it is again not possible to answer the
question whether novice writers produce more orientational clashes than expert writers do. In fact, 3 of the 4 orientational clashes were produced by expert writers (one native speaker, and two learners) and only 1 was produced by a novice writer (who was also a native speaker).

To answer question 4 (do novice writers produce fewer composite orientations than expert writers do) and 5 (do novice writers prefer expression of circumstantial information in separate adverbials instead of compacting) consider the results in Table 9.39:

<table>
<thead>
<tr>
<th></th>
<th>composite</th>
<th>compacting</th>
<th>two adv.</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert (n=123)</td>
<td>17</td>
<td>21</td>
<td>48</td>
<td>14</td>
</tr>
<tr>
<td>novice (n=89)</td>
<td>29</td>
<td>11</td>
<td>51</td>
<td>9</td>
</tr>
</tbody>
</table>

\[ \chi^2(3) = 7.51, p = .057, C = .19 \]

Table 9.39: Result sentences in Writing Item I-2 (scores are in percentages)

Again, there are no significant differences between novice writers and expert writers, but tendencies can be recognized. Notice, for instance, that this table indicates it is the novice writers that tend to produce more composite orientations, whereas they at the same time tend to make less use of compacting than expert writers do.

Finally, when we consider editing moves, we find that novice writers tend to edit less than expert writers do, and when they do, they tend to focus on other areas than the sentence-initial area.

<table>
<thead>
<tr>
<th></th>
<th>no editing</th>
<th>editing involved expression of Time and Place in initial area</th>
<th>other editing moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>expert (n=94)</td>
<td>32</td>
<td>32</td>
<td>36</td>
</tr>
<tr>
<td>novice (n=72)</td>
<td>47</td>
<td>32</td>
<td>21</td>
</tr>
</tbody>
</table>

\[ \chi^2(2) = 5.73, p = .057, C = .18 \]

Table 9.40: Editing moves in Writing Item I-2 (scores are in percentages)
In conclusion, neither of the Writing Items provided extra information on orientational clashes: not enough clashes were produced to allow for statistical analysis. A qualitative analysis did not provide much information either: none of the writing protocols that led to an orientational clash revealed any pondering of the subject on this clash. With regard to composite orientation we did find some more information. It seems that the underproduction of composite orientations in the LEC may be due to the fact that the writers of the NEC-texts are language learners, rather than novice writers. Furthermore, with regard to compacting: this seems to be a technique that is more used by expert writers than by novice writers. No clear association between overproduction of orientational clashes and underproduction of compacting solutions could be established for language learners.

9.5.4 Concluding remarks
We can now summarize the answers to the 5 questions formulated at the beginning of this section as follows:

(1) Do language learners/novice writers know that orientational clashes are problematic in English?
Both language learners and novice writers have shown that they are aware of the fact that orientational clashes are doubtful. It has also been shown, however, that – as a group – language learners needed some extra time and probably also explicit focusing on this construction before they rejected an orientational clash: the final judgments of the orientational clash (after being confronted with other sentences) were significantly worse than the original judgment.

(2) Are language learners/novice writers as aware of the problematic nature of orientational clashes as native speakers/expert writers are?
Both language learners and novice writers have shown that they are as aware of the problematic nature of orientational clashes as native speakers and expert writers are. However, for learners only their final judgment showed as much awareness. Had they had only one go at the judgment of the sentences, they would have judged the orientational clash significantly more positively than native speakers did. This indicates that learners' awareness may have been positively influenced by the simple nature of the task and the explicit focusing.
It would be interesting, in a follow-up experiment, to present learners and native speakers with an essay which contains quite a few mistakes, including some orientational clashes, and then see to what extent they are able to single out the orientational clash as possibly problematic.

(3) Do language learners/novice writers produce as many orientational clashes as native speakers/expert writers do?
This question could not be answered. The only two productive tasks yielded too few orientational clashes to allow statistical testing.

(4) Do language learners/novice writers produce as many composite orientations as native speakers/expert writers do?
In both productive tasks learners produced fewer composite orientations than learners did. In one task there was no difference between novice writer and expert writer production of composite orientations; in another task novice writers possibly produced more composite orientations than expert writers. In sum, it seems fair to say that the underproduction of composite orientations in the LEC (in comparison to the NEC) may be due to language competence rather than writing competence.

(5) Do language learners/novice writers have a larger chance at producing an orientational clash, because they are less likely to make use of compacting mechanisms (see Chapter 7)?
For learners in comparison to native speakers no difference in use of compacting techniques could be established. It was also not possible to establish a relation between compacting and orientational clashes (as in: the more a subject makes use or compacting techniques, the slimmer the chance that she will produce an orientational clash). Sections 9.5.2 and 9.5.3 did establish, however, that novice writers made less use of compacting than expert writers did.

9.6 Conclusion
The experiment discussed in this chapter had two important aims. In the first place it was intended to gather independent data on the ‘context-driven’-hypothesis formulated in Chapter 5, namely that the relative order of adverbials in complex beginnings is influenced by the TSC in the
context. In the second place it was intended to examine more closely some of the hypotheses that resulted from a comparison of learner and native complex beginnings (collected from the Learners English Corpus [LEC] and the Native English Corpus [NEC]). More specifically, it was intended to examine to what extent learner-native differences could be attributed to differences in *language competence*, to differences in *discourse competence/writing experience* or to the interaction between these two parameters. The examinations were not limited to the various results but also concerned the processes that led to these results. It was therefore possible to examine for instance the language competence hypothesis in Chapter 7, which entailed that learners – more than native speakers – start their construction processes with rhetorical elements and they therefore have a higher chance of producing stepwise orientations. At this point it should again be stressed that the items examined in this chapter are series of case studies and that the results should be interpreted accordingly. Nevertheless, while keeping this restriction in mind, the following suggestions can be made:

**with regard to the 'context-driven'-hypothesis:**
- Both the results of the Judgment Items and the results of Writing Items II-2 (especially in comparison with Unscramble Item 3) suggest that the order in the complex beginnings is indeed discourse driven. At this point, we therefore have three independent sources that all support the ‘context-driven’-hypothesis, namely the analysis of the contexts of complex beginnings in the NEC, the analysis of the contexts of complex beginnings in the NDC (Native Dutch Corpus) and the results of this experiment. In combination with the idea that second initial adverbials perform grounding functions with regard to the first initial adverbial that functions in the TSC this seems a rather more powerful description of relative order in complex beginning than 'adverbs precede clauses', 'rhetorical precedes predicational' and 'TIME precedes PLACE', the more traditional means of describing order in complex beginnings.

**with regard to stepwise and complex orientations and the differences between LEC and NEC-writers:**
- As long as the tasks to be carried out are not too demanding, language learners are as good as native speakers and novice writers are as good as expert writers at recognizing which complex
beginning fits best in a particular context. Only when the task becomes more complicated does it seem as if language learners have more problems than native speakers.

- Overproduction of stepwise orientations and underproduction of complex orientations could be linked to the factor writing competence; that is to say, the fact that the LEC yielded more stepwise orientations and fewer complex orientations than the NEC may be more due to the fact that LEC-writers are novice writers rather than that they are language learners.

- As far as writing processes are concerned, it could be established that native speakers produce complex orientations differently than learners do. More native speakers than learners chose to place a representational adverbial, then construct the predication and only then insert the rhetorical adverbial in between the representational adverbial and the predication. Learners, more than native speakers, followed a left-right strategy and never made any changes in sentence openings as soon as they were created. These differences are, however, minimal: most complex beginnings (native and learner) were produced without the subject feeling the need to edit at all.

- Language learners, more than native speakers, produce paragraphs in which the text does not flow easily. It seems as if this is due to the fact that they are rather concerned with solving rhetorical problems at vocabulary level than at discourse level.

- There are indications that complex beginnings can indeed be seen as cognitive units, but more research is necessary.15

with regard to orientational clashes and composite orientations

- The results of the Judgment Items indicate that learners have a harder time recognizing orientational clashes as doubtful or unacceptable than native speakers do. They also suggest that learners need more time and direction of attention to the problem before they make a judgment that is similar to the native speaker judgments. Unfortunately, the more productive tasks did not shed extra light on this issue and more testing is therefore necessary.

- The results of the Writing Items indicate that learners underproduce composite orientations in comparison to native speakers. No such difference could be established for novice writers in comparison to expert writers.
The results of the Writing Items indicate that novice writers make less use of compacting techniques than expert writers do. No relation between orientational clashes and compacting could be established.

The above outcomes suggest that the following research is warranted:
- Experiments that may help establish whether complex beginnings can indeed be seen as a cognitive whole. It would be interesting for instance to examine whether readers and writers pause after interpreting or producing a complex beginning.
- More extensive experiments per type of orientation that may evaluate the outcomes of this experiment. Since this experiment is designed as a exploratory multiple case study, the outcomes are dependent upon the specific character of each of the items. It would be insightful to collect data on a whole set of complex and stepwise alternations in their context, for instance.
- Experiments that elicit more judgments on orientational clashes and other types of complex beginnings in a context that does not explicitly direct the subjects’ focus to the sentence-initial area. As was pointed out above, it may be the case that learners and novice writers recognized the orientational clashes as a result of the fact that the comparison with other items directed their attention to the sentence-initial adverbials. Whether or not non-native speakers would recognize orientational clashes as problematic in an entire text is quite a different matter.
- For all experiments the items need to be tested extensively, especially since items that depend on the context for validity can easily surprise the researcher at a later stage.

**Notes**

Many people helped me find subjects for this experiment. For ENE, I would like to thank Heather Gynn, Peter Daniels, Tirah Dragonfire, Anita Langford, Iwona Bendkowska, Tamara Jungwirth, Kukui Marie and especially Joy Burrough-Boenisch. Jan-Maarten Deurvorst, Marieke Klomp, Petra Poelmans, Johan Woldendorp and Renate Stoue helped find DNE-subjects. For DNN, I’d like to thank Lois Kemp, Eric Kellerman, Rod Lyall, Sinéad McDermott and especially Wim van der Wurff. Finally, for the ENN-group, I am greatly indebted to Roel Vismans at the Dutch department of the
University of Hull, and to Rian Verpalen and Frank van Kampen at the Foreign Student Office of the University of Amsterdam.  

Three cases (out of sixty-four) had to be excluded from the analysis, since these subjects did not have time to finish the entire item. For other items, too, some results had to be excluded due to lack of time, or software problems.  

Note that this table also presents proportions. The reason for this is that the binomial test is based on proportions (rather than absolute numbers as is the case for the chi-square tests that is carried out in most other test situations). The complex and stepwise orientations listed here are examples. Other complex and stepwise orientations are possible and - when produced - they have been included in the count. When the classes 'complex beginning' and 'other' are recoded as one class, the following table is the result:

<table>
<thead>
<tr>
<th>Writing Item 2</th>
<th>Unscrambling Item 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>stepwise orientation</td>
</tr>
<tr>
<td>Writing Item 2</td>
<td>stepwise orientation</td>
</tr>
<tr>
<td></td>
<td>other</td>
</tr>
</tbody>
</table>

With $\chi^2 = 4.321$ and $p = .038$ (McNemar's test for two related samples), these results, too, are significant.

In Unscrambling Item 7, the category ‘stepwise orientation’ also includes subcategories as ‘stepwise in stepwise’ (Moreover, because of the growing population, by the year 2000, etc.) and ‘grounded in stepwise’ (Moreover, by the year 2000, because of the growing population, etc). The category ‘complex orientation’ includes regular complex orientations and complex in stepwise orientations: Because of the growing populations, moreover, by the year 2001.

Unscramble Item 7 could not be tested: too many cells showed an expected frequency of <5.

Notice by the way that despite the fact that native speakers more than learners construct a complex orientation by inserting the rhetorical adverbial at a later point in time, still the majority of the native speakers construct this orientation ‘from left to right’.

The category ‘Rhetorical element’ did not only include the adverbials for example and for instance, but also the noun phrase An example as an overture for An example is.
Note that in these cases editing moves concerning contrastive vocabulary were classified as editing moves involving contrast rather than ‘other editing moves’.

In contrast to the previous item, however, it is not the case anymore that a majority of learners find the sentence *doubtful* or *unacceptable*.

N=61 for native speakers and N=110 for learners because some subjects (mostly native speakers) were inadvertently supplied with software that contained a faulty version of this item (see Chapter 6).

Notice that two cells (20%) have an expected frequency of <5.

Note that for reasons of efficiency the example sentences only give the sentence that deals with the potential orientational clash/composite orientation. The rest of the passage is deleted.

This research would also need to include the fact that native speakers (at least more than learners) insert the rhetorical adverbial at a later point. This of course goes against the idea of a complex orientation as a cognitive whole.
Summary and discussion

10.1 Introduction
Chapter 1 set out to examine complex beginning from three different perspectives: (1) form and function of complex beginnings, (2) complex beginnings in native and learner English and (3) the construction process of complex beginnings. Throughout the investigation of the questions that were formulated for each of these three perspectives, many topics were touched upon: adverbial categorization, discourse organization and the pragmatics of sentence openings, the functional structure of the orientational area, corpus analysis, language acquisition, contrastive rhetoric and writing processes. At this point the time has come to raise each of the questions formulated in Chapter 1 again and, with the help of the information gathered throughout Chapters 2-10, to attempt to formulate answers to them. Section 10.2 will therefore consider the questions that pertained to the form and function of complex beginnings, namely what types of complex beginnings occur in English and what discourse functions do complex beginnings have? Section 10.3 will discuss a second-language perspective on complex beginnings and it will therefore address questions that concern the differences between learner and native complex beginnings. Section 10.4 will revisit the process-perspective on complex beginnings and evaluate the information that was gathered in Chapters 7, 8 and 9 on how complex beginnings are constructed, whether they are all constructed in the same way and whether native construction processes of complex beginnings differ from learner’s constructions processes.

10.2 Form and function of complex beginnings
As a starting point for the search for types of complex beginnings in English, Chapter 3 examined the traditional means used to describe the relative order of adverbials: an order in terms of syntactic elements (i.e. clauses precede adverb phrases), an order in terms of semantic functions
(i.e. TIME precedes PLACE) and an order in terms of layer modification (i.e. rhetorical precedes propositional precedes predicational). However, when these ordering principles were applied to the 496 complex beginnings that were gathered from a 500,000 word English corpus it was obvious that none of them adequately described the orders that were actually encountered. Too many complex beginnings displayed orders that were the reverse of those that were predicted by the principles. Another means to describe the relative order of adverbials in complex beginnings had to be looked for and, in Chapter 4, it was found: ‘relation of the second initial adverbial to the first’. It was established that whether or not the second adverbial entered into a relation with the first adverbial divided all complex beginnings into two separate groups, namely those in which the second adverbial did not relate to the first adverbial and those in which the second adverbial did relate to the first adverbial. The nature of this relation and the way the complex beginning as a whole then related to the main clause gave rise to several subclassifications within these two groups. Figure 10.1 presents an overview of the five types of complex beginnings that were distinguished. Authentic examples of each type are given in (1)-(5):

(1) **Stepwise orientations**
   a. **However, between 1989 and 1993** the percentages buying or reading twentieth-century fiction (or both) during the year prior to that in which the survey was conducted showed no discernible trend, fluctuating to within 2 to 3 points of 15 per cent. [NEC 417-184]

   b. **Although scientists have long recognized the importance of adhesive interactions in the body, until recently** they knew little about how such interactions exert their diverse effects on physiology. [NEC 94-11]

(2) **Compound orientations**
   a. **Stripped of his Army rank, hair falling over his collar**, Anthony Dryland presents an unlikely figure of retribution. [NEC 56-194]

   b. **When monks in Vietnam set themselves alight during the Vietnam war, when monks in Burma defied the military junta**, they were acting in accordance with an ancient tradition of social responsibility. [NEC 171-394]
Figure 10.1: A typology of complex beginnings
(3) **Grounded orientations**
   a. *Later, with England converted to Christianity*, the daughters of the great Anglo-Saxon noblemen were sent abroad to France to be educated in the Christian and classical mode. [NEC 3-21]
   b. *Then, a month later*, Charles Wilson appeared at an art exhibition being held by a friend of mine at her studio. [NEC 111-315]

(4) **Complex orientations**
   a. *By the early 1970s, however*, this attitude was changing and Sir Robert Mark, who took over as Metropolitan Police Commissioner, promised to do away with corruption within the force. [NEC 119-329]
   b. *In the matter of trout fishing, of course*, things are much more predictable. [NEC 53-185]

(5) **Composite orientations**
   a. *At a conference in London today*, Mr Whiskin will stand up and ask his audience to change their minds too. [NEC 164-390]
   b. *Two years ago in Dublin* I said if you don't have something that is perceived to be inclusive you've had it. [NEC 219-479]

Chapter 5 set out to investigate the functionality of these orders. It was shown that first initial adverbials generally help structure the discourse, and that in grounded orientations, complex orientations and composite orientations the second initial adverbial then provided some kind of grounding to that first initial adverbial. As a result the second initial adverbial ensured that the first initial adverbial could adequately fulfill its main function, namely provide an orientation to the clause or passage that ensued. For instance, for several passages it was shown that an initial spatial or temporal adverbial only gained a truly orientational status after the second initial adverbial had provided instructions for the reader on how to value the first initial adverbial – as in the passage in (6) – or after the second initial adverbial had added relevance to the first by providing, for instance, an answer to the question of why the author took her audience to a particular point in time or in space – as in the passage in (7).

(6) **For years** police corruption simply did not exist in the public’s mind. Policemen were brave, upstanding and trustworthy. No one
would ever doubt the word of an officer. By the early 1970s, however, this attitude was changing. At that time, Sir Robert Mark, who took over as Metropolitan Police Commissioner, promised to do away with corruption within the force. His philosophy seemed to be: ‘A good police force is one that catches more criminals than it employs.’

(7) On the mainland, too, the ‘new right’ has allowed its mask to slip. The neo-Fascists’ leader, Mr Fini, with his glasses and air of a young professor, could not be further from the textbook neo-Fascist. Indeed, during the election campaign he shunned the word fastidiously. Yet this shrewd operator treads a fine line between reassuring the public and throwing morsels of ideology to his rank and file. On Friday, Mr Fini’s mask slipped when he sang the praises of Mussolini to La Stampa. Mr Berlusconi, he said, would have his job cut out to match the achievements of Mussolini. On Monday night, when the votes were in the bag, young neo-Fascist bloods deliriously gave the fascist salute and fought police in central Rome. [NEC 432-191]

In stepwise and compound orientations, on the other hand, no such relevance was added to the first initial adverbial.

The absence of a relation between the second and the first initial adverbial in stepwise orientations was also hypothesized to provide an explanation for the doubtful status of complex beginnings such as in (8), dubbed orientational clashes by Hannay (1994):

(8) ?At the moment, at night I’m taking more asthma drugs to help me breathe more easily. [NEC 403-177]

In all complex orientations, grounded orientations and composite orientations the cognitive strain of interpreting the double orientational frame is eased by the fact that the relation between the two orientations is clear. In compound orientations the cognitive strain is eased as well, since the second orientation modifies the same element and in the same way as the first orientation. In stepwise orientations, on the other hand, both elements function independently of each other and therefore both interpretations need to be processed independently. However, for most stepwise orientations, too, the cognitive processing load is reduced in
various ways. For the examples in (9a) and (9b), for instance, the first initial adverbial sets up a clear connection with the preceding discourse (in the same way rhetorical adverbials can), either because the semantics of the adverb phrase inherently do so (*then*), or because the initial adverbial makes an explicit reference. In (9b), for instance, the preceding texts discussed some difficulties with regard to a particular line of investigation. The first orientation in the complex beginning subsequently resumes these difficulties. The orientation does not therefore provide the sentence with a new concept to the sentence; rather it provides an explicit link to a relevant concept in the preceding discourse. In stepwise orientations such as in (9c), the first adverbial clearly modifies the entire core predication, while the second can only be interpreted as selecting an element *in* this core predication (the only entity that can be accompanied in this clause is Carey), and it is therefore nested in the orientational space that was built by the first adverbial (a full set of ways in which the processing load was reduced in the examples encountered in the NEC can be found in Chapter 4):

(9)  

(a) *Then suddenly* you've got to adjust to being not important. [NEC 448-201] [9/44]  

(b) *In spite of the difficulties, by the mid-1980s* scientists had managed to isolate several cell-surface adhesion receptors. [NEC 96-11] [4/44]  

(c) *In 1879, accompanied by Marie Gwinn, her "devoted companion,"* Carey went off to Europe to study and received a Ph.D. from the University of Zurich in 1882. [NEC 67-8] [10/44]  

For orientational clashes, on the other hand, no such reduction of the processing load is achieved. In those sentences the two orientations each introduce new concepts (i.e. they do not provide an explicit link to the previous discourse), and they both define their own orientational space. And crucially, the relation between these two spaces is not immediately apparent.

This concludes the observations with regard to the form of complex beginnings in English. A first step in the investigation of the functionality of complex beginnings (question 2) consisted of an analysis of the text position of this construction. In Chapter 5, it was established that complex beginnings occur significantly more often than expected (had the distribution been random) in paragraph-initial position than in other
positions in the paragraph, indicating that they are often used to fit larger text-chunks such as paragraphs in their context. When subsequently the contexts of various types of complex beginnings were examined, this suggestion was supported. An interesting feature of complex beginnings is that the order of the adverbials could in fact be investigated in a very systematic way. Quite a few stepwise orientations form a minimal pair with complex orientations (that is, when the adverbials that together form the stepwise orientation are placed in reverse order, the result is a complex orientation; and vice versa). Similarly, another set of stepwise orientations can be paired with grounded orientations (that is, when the adverbials that together form the stepwise orientation are placed in reverse order, the result is a grounded orientation; and vice versa again). This means that the contexts of stepwise and complex orientations and the contexts of stepwise and grounded orientations could be systematically compared (see Chapter 5). The most important observation resulting from this exercise was that the relative order of the adverbials in a complex beginning is not accidental. It turns out that first initial adverbials generally function in a text-strategic continuity (TSC) and that often second initial adverbials either explained the relevance of the shift from one point in the TSC to another (complex, grounded and composite orientations) or that they themselves initiate a TSC (stepwise orientations). When a complex orientation is encountered in a text, therefore, this often indicates a continuation of a previously initiated TSC, while a stepwise orientation often indicates the initiation of a new TSC, be it global or local and be it initiated by the first or the second adverbial (see Chapter 5). The full set of ordering rules is given in (10).

(10) a  supporter major communicative goal ^ other adverbial
    b  supporter TSC ^ other adverbial (’other adverbial’ could turn out to be initiator new local TSC)
    c  local TSC ^ global TSC (local TSC need to be established before or semantics of first-initial adverbial need to suggest initiation of new local TSC)
    d  adverbial that provides chaining link ^ other adverbial

Statistical analysis in Chapter 5 showed that only in a minority of cases can the order of the adverbials not be motivated with the help of an analysis of the TSC in the context.
The TSC principle also explains some of the observations that resulted from a more traditional examination of the relative order of adverbials in complex beginnings. Chapter 3 showed for instance that second initial adverbials in complex beginnings are most often syntactically realized as clauses or as prepositional phrases. When it is said that the second initial adverbial is used to ground the first initial adverbial, the one that functions in the TSC, this is taken to mean that it relates the concept referred to by the first initial adverbial to a Given referent. In such a situation this preference for syntactic realization as clause or as a prepositional phrase makes sense: both clauses and prepositional phrases have tools readily available (verbal elements that require arguments and preposition, respectively) that can easily establish such relations. On the other hand, when the second initial adverbial in a complex orientation was realized as an adverb phrase, this often turned out to be a rhetorical adverbial, and since these are essentially speaking no more than explicit statements of relations, these, too, are inherently equipped to fulfill a grounding function.

Support for the above analyses, which are based on an analysis of examples gathered from the NEC, comes from three different sources. In the linguistic literature various researchers have pointed to similar mechanisms in the order of elements (see for instance Altenberg 1998, Virtanen 1992). Furthermore, an analysis of complex beginnings collected from a Native Dutch Corpus (NDC) suggests that in Dutch, too, the context of complex beginnings drives the relative order of the adverbials. Finally, the results of the exploratory experiment reported on in Chapters 8 and 9 also suggest that native speakers of English (professional writers) base the construction of their complex beginnings on the TSC in the context of the item they are working on.

Finally, the close examination of the relations between the elements in sentence openings gave rise to doubts concerning the functional structure of the sentence opening as formulated in the context of Functional Grammar. Remember that FG’s description of the sentence-initial area revolves around the distinction between intra-clausal and extra-clausal elements and their different functionality:

\[ P_2, P_1 S V_i, O, X, P_3. \]

However, both Chapter 2 and Chapter 5 pointed out several problems concerning this structure. The most important of these are that for many
elements it is not possible to establish unambiguously whether an element is positioned in P2 or P1 and that it is not entirely certain how useful the distinction between P2 and P1 really is. Analyses of several examples in Chapters 3-5 have repeatedly shown that typical representational satellites, i.e. elements that would normally be assigned to P1, can easily fulfill text organizing functions, a functionality that is normally reserved for P2-elements. Furthermore, Hannay (2001) has shown that the relations between the adverbials in the different types of complex beginnings can also occur between the Subject and elements in post-subject position. As a result, Hannay came to the conclusion that (a) the functional description of the sentence opening did not need to distinguish between P1 and P2, but that it did need to be extended up to and including the element in the post-subject position, and that (b) it needed to reflect the fact that in several orientations one element may enter in a relation with a preceding element and that more than one orientation should be possible. Accordingly, he suggests the following structure for what he calls the orientational field:


When applied to examples of complex beginnings it was possible to unambiguously assign adverbial elements to the slots that are defined in this structure. While there are still several problems to be solved (among others, the way a relation between an element position in an M-slot and the main clause is taken care of), it seems a promising path for further exploration.

10.3 A language-acquisition perspective on complex beginnings

The main questions with regard to the language-acquisition perspective on complex beginnings were:

(a) Do Dutch learners of English (undergraduate students) produce the same types of complex beginnings, and in the same quantity, as native speakers do?

(b) If they do not, can observed differences between complex beginnings produced by native speakers and by Dutch learners be attributed to language competence, to general discourse competence and/or to language-specific discourse competence?
The first question was easily answered with the help of a contrastive corpus analysis (Chapter 6). A comparison between the complex beginnings in the Learner English Corpus (LEC) and the Native English Corpus (NEC) showed that the LEC-writers not only produced more complex beginnings in general (despite the fact that a high number of students did not produce any complex beginnings at all) but that they also produced different types of complex beginnings. Most conspicuously, learners tended to overproduce stepwise orientations, and in particular they overproduced stepwise orientations that consist of a rhetorical adverbial followed by a representational adverbial. Furthermore, learners underproduced all other types of orientations (compound orientations, grounded orientations, complex orientations and composite orientations). Finally, it was suspected (but in Chapter 6 this could not yet be based on statistical evidence) that learners produced more orientational clashes and orientational overloads than native speakers. Chapters 6 and 7 suggested three sources for these differences, namely differences in language competence (the LEC writers were native speakers of Dutch writing in their second language, while the NEC writers were native speakers of English writing in their mother tongue), differences in discourse competence (generalized discourse competence and language-specific discourse competence) and in writing processes (the LEC writers were novice writers, while the NEC writers were expert writers).

With regard to the factor language competence Chapter 7 suggested that the differences between English and Dutch sentence grammar may induce language learners to start building their sentence by placing the rhetorical adverbial and only then to proceed to the construction of the core message (including placement of representational adverbials). This was referred to as the language competence hypothesis. With regard to the factor discourse competence Chapter 7 examined textual organization in Dutch, in English and in learner English. Interestingly, this examination revealed no differences between Dutch and English, but it did reveal differences between learner English and native English and also between learner English and Dutch. This led to the idea that differences in form and use of complex beginnings in the LEC and in the NEC was the result of differences in generalized discourse competence rather than of differences in language-specific discourse competence. This was referred to as the discourse competence hypothesis. Furthermore, with regard to the factor writing processes, it was suggested...
that differences between learner and native complex beginnings could also be caused by the fact that novice writers (and language learners who often operate as novice writers), when writing, are assumed to limit themselves more to knowledge telling, while expert writers are assumed to apply knowledge transformation processes as well. As a result, learners may be less flexible than expert writers with regard to the syntactic encoding of information. For instance, while novice writers were hypothesized to encode temporal and spatial information more often in adverbial elements, native speakers were hypothesized to opt more often for a compacting solution, i.e. a solution in which the spatial or temporal information was included in the subject: *In the ER, a patient tried to wreck a room* then becomes *An ER-patient tried to wreck a room*. An extended hypothesis was that subjects who do not apply compacting techniques (i.e. who do not reduce their number of adverbials) are more likely to overproduce orientational clashes. This was referred to as the **writing process hypothesis**.

An exploratory experiment reported on in Chapters 8 and 9 yielded the following information. With regard to the overproduction of complex beginnings in general the experiment yielded no systematic information. For most items, learners produced as many complex beginnings as native speakers did, despite the fact that the corpus analysis showed an overproduction of complex beginnings in the LEC in comparison to the NEC. Similarly, for most items no differences between novice writers and expert writers could be revealed. One of the reasons could be that in most items subjects (whether they were native or non-native speakers of English and whether they were expert writers or novice writers) did not have much freedom in their sentence construction: in the unscrambling items, for instance, they could not manipulate the information they were provided with (change its syntactic encoding, that is) other than think about the order in which they wanted to put it. This task may have elicited complex beginnings, therefore, where native speakers/expert writers would normally have produced a different kind of sentence opening.

Furthermore, learners’ overproduction of stepwise orientations and underproduction of all other types of complex beginnings seems to be the result of lack of **discourse competence/writing experience**. When comparing results of native English subjects (expert and novice writers) with results of non-native subjects (again, expert and novice writers), no systematic differences could be observed. However, a comparison of the
results of novice writers (native English and native Dutch) with those of expert writers (native English and native Dutch), revealed an overproduction of stepwise orientations and an underproduction of complex orientations for several different items. Examination of the interaction between the factors language competence and discourse competence revealed no significant influences and all outcomes are therefore in support of the discourse competence hypothesis: differences between stepwise orientations, complex orientations and grounded orientations in the LEC and the NEC are most probably the result of differences in generalized discourse competence rather than of language-specific discourse competence. Since the difference in frequency of stepwise orientations seems due to discourse competence rather than language competence, it is not surprising anymore that no support was found for the language competence hypothesis, which holds that learners more than native speakers start their construction of the sentence with a rhetorical element and that this may be a reason for overproduction of stepwise orientations.

However, with regard to language competence one interesting tendency could be revealed: when the complexity of a task increased, learners had a harder time producing/evaluating the most adequate sentence openings. That is, in the judgment task they still did as well as native speakers when it came to finding the sentence that displayed the best textual fit, but it seems as if in production tasks they had a harder time recognizing which sentence opening fit best. Crucially, learners were shown to establish less frequently coherent relations between the various sentences when writing a passage. Since a stepwise orientation generally establishes a local link between two units, whereas a complex orientations establishes a more global link, it may be that in actual writing overproduction of stepwise orientations by LEC writers is after all also due to language competence: the step from no relation to a local relation between units is probably easier to make than the step between no relation and a global relation. More research is needed to tease apart the influences of discourse competence on the one hand and language competence on the other.

One more finding on stepwise and complex orientations should be stressed here. While native speakers tended to approach each unscrambling item on an individual basis, learners tended to apply the same strategy to each of the unscrambling items. That is, the prototypical native speaker produced a stepwise orientation for the unscramble item
containing moreover (which makes sense, since the canonical position of moreover is absolute sentence-initial position) while they produce some other kind of sentence opening for the unscrambling item containing therefore (again, this makes sense, since the canonical position of therefore is not absolute sentence-initial position). If a language learner created a stepwise orientation for the moreover-item, however, she often also created a stepwise orientation for the therefore-item. This suggests that language competence does play some role in the production of complex beginnings: learners are less aware of prototypical positions than native speakers are. Furthermore, learners pick one strategy and apply that generically to all situations they come across, while native speakers know how to distinguish situations that at first sight appear to be similar.

With regard to orientational clashes, it is likely that production of this type of sentence opening may be the result of a difference in language competence. In a judgment task testing two orientational clashes Dutch learners of English (novice writers and expert writers) significantly more often than native speakers considered an orientational clash acceptable when first confronted with it. Only after their attention had been directed to the order of the adverbials in the sentence-initial area were they as inclined as native speakers to reject the sentence. However, no straightforward relation could be established between production of orientational clashes and lack of compacting solutions. In fact, while lack of language competence is probably the reason for the fact that some subjects do not recognize an orientational clash and do not produce composite orientations, lack of discourse competence tend to cause less frequent use of compacting techniques. Notice that this last observation supports the writing process hypothesis, which holds that expert writers make more use of compacting than novice writers. Notice also that this difference could only be established based on the result passage. Analysis of the writing process data available in this study did not reveal any difference between expert and novice writers.

The experiment left many questions, however. The main reason for this is that the tasks that, in comparison to the other tasks in the experiment, resembled the actual writing process most closely yielded in the end the least information on complex beginnings. Subjects simply chose other means than a complex beginning to express the information that they were provided with. Chapter 9 therefore makes several suggestions for continued research.
10.4 A process perspective on complex beginnings

The questions that Chapter 1 raised with regard to a process perspective on complex beginnings were:

(a) are all types of complex beginnings produced in the same way?
(b) do Dutch learners of English produce individual types of complex beginnings in the same way as native speakers do?

The first question was partly inspired by Halliday’s claim that a rhetorical-propositional-representational order is the most natural order. This almost suggests that when a complex orientation (generally representational-rhetorical or representational-propositional) is produced, the construction process goes via a stepwise orientation. To a certain extent Halliday seems to be correct: when sentences are constructed in isolation (i.e. without a context), stepwise orientations are far more popular than complex orientations. It seems therefore that complex orientations need to be motivated by the context, whereas stepwise orientations are fully acceptable alternatives in isolation. However, in real life sentences are never constructed in isolation and the analyses of the production protocols gathered in the experiment show that it is not the case that complex orientations are generally produced via stepwise orientations. By far the majority of both the stepwise orientations and the complex orientations are produced ‘from left to right’. That is, when a result sentence contains a stepwise orientation, the order in which the subject handled the elements is most probably Rhetorical-Representational-Predication. And when a result sentence contains a complex orientation, the order in which the subject handled the elements is most probably Representational-Rhetorical-Predication. Although there were some examples in which a stepwise orientation was changed into a complex orientation (i.e. production of complex orientation via stepwise orientation), about as many examples displayed a change from a complex to a stepwise orientation. Therefore, no order is more natural than another order and in fact this also suggests complex beginnings can possibly be considered a cognitive whole. This suggestion can, for instance, be tested with the help of experiments that examine whether readers and writers pause after interpreting or producing a complex beginning.

With regard to the differences between native speaker and learner complex beginnings, one difference could be observed: learners almost always produce their complex orientations ‘from left to right’, while more native speakers than learners follow a process as illustrated in (13):
(13) a In Britain
   b In Britain, they do things differently
   c In Britain, however, they do things differently

This building process suggests a conscious analysis of the context and the way the sentence at hand is to fit in this context. However, as pointed out above, the majority of the native speakers, too, make use of the ‘left to right’ process.

10.5 Conclusion
To a study entirely dedicated to complex beginnings I prefer to write a simple conclusion. With regard to the form of complex beginnings, it has been amply shown that the relative order of adverbials in complex beginnings cannot be adequately described by principles solely based on syntactic realization, semantic function or layer modification. Instead, the order of the adverbials in a complex beginning should be viewed in terms of the relation between the first and the second adverbial and the relation of the complex beginning as a whole to the following clause. This perspective yields a classification of complex beginnings into stepwise orientations, compound orientations, grounded orientations, complex orientations and composite orientations. It has also been shown that examination of these five types of complex beginnings with the help of syntactic realization, semantic function and layer modification suddenly reveals surprising regularities (i.e. stepwise orientations do display the high-low order that was predicted by SFG and FG grammarians; and grounded orientations indeed display adverb-clause orders). Examination of how complex beginnings are used subsequently provides explanations for why these regularities may occur. For instance, the way the second adverbial grounds the first adverbial in complex and grounded orientations provides an explanation for the preponderant syntactic realization as a clause or a prepositional phrase of the second initial adverbial. This explanatory power is a major advantage of this classification system and a subsequent step in the examination of the system developed in this study is to test it in other areas of the sentence (notably the combination of subject and elements in pre-subject position, or the combinations of noun phrases and subsequent relative clauses).
With regard to the function of complex beginnings, analysis of a host of examples has shown that the relative order of the adverbials in this construction is not accidental. Complex beginnings are used to structure a text and to provide coherence. The main strategy that was encountered was that the first initial adverbial of a complex beginning functioned in a text-strategic continuity (TSC). The second adverbial then provided relevance to the first orientation or initiated a local TSC itself. It has also been shown that inadequate use of complex beginnings can destroy the flow of the discourse, by raising expectations for the interpreter that are not followed up. As such, it is essential that a language user knows how a complex beginning can support her striving for a coherent text most effectively.

With regard to this second language perspective, it has been shown that Dutch learners of English indeed have more problems than native speakers when it comes to recognizing orientational clashes. Other differences that were encountered between learner complex beginnings and native complex beginnings seem to be due to differences in discourse competence rather than to differences in language competence. For instance, novice writers tend to overproduce stepwise orientations, and specifically stepwise orientations that consist of a rhetorical adverbial followed by another adverbial. Furthermore, novice writers tend to apply fewer compacting techniques (Last week, an ER-patient wrecked a room instead of Last week in the ER an patient wrecked a room) than expert writers do. A further step in the investigation of complex beginnings might be to consider stepwise and complex orientations and sets of stepwise and grounded orientations with a varying degree of textual fit and examine to what extent learners and native speakers, novice writers and expert writers carry out editing moves.

With regard to the construction of complex beginnings, the tasks in the experiment did not reveal differences between the construction of stepwise orientations versus complex orientations were produced. Both orientations tend to be produced 'from left to right', indicating that it is not likely that the relative order in stepwise orientations is more natural than the relative order in complex orientations. When produced in the appropriate context, both orders are as natural. More insights in the production processes of complex beginnings can be gained in experiments that emulate more closely the actual writing process while they at the same time still yield enough data on complex beginnings. The design of such an experiment is an interesting challenge.
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The cloze text

A.1 The text

The cloze text was presented to the subjects in 9 separate windows. Subjects could browse freely back and forth between the windows. They had 20 minutes to complete the task.

Save this threatened species

Police informers make a vital contribution to crime detection. But they are in danger. Crime Correspondent Neil Darbyshire argues that the secrecy of the system must be preserved at all costs.

THE armed robber's wife was close to hysteria in the public gallery of the court. The judge had decided to make an example of her husband following his conviction for the shotgun hold-up of a security van and sentenced him to 15 years. Even with remission he would not be out for almost a decade. She shouted a stream of foul-mouthed curses at judge and jury and as her husband trudged down the steps to the cells the age-old courtroom promise rang in his ears. 'I'll be waiting for you, darling.'

Two hours later the woman arrived for a prearranged meeting (1) ________ two Scotland Yard detectives and a security company representative, who (2) ________ her a cheque for 25,000 pounds. It was she who (3) ________ told the police what her husband had been up to and (4) ________ to find him. Their marriage had not been going well (5) ________ she felt she deserved a break. The reward would help (6) ________ to enjoy it. The police informer, most feared and despised (7) ________ of the underworld, comes in many guises. Some are people (8) ________ give information once and disappear, but the most prized are (9) ________ who keep delivering for many years.

Wives and girlfriends are (10) ________ common sources of information, but the vast majority of 'grasses' (11) ________ themselves criminals and first give information while under arrest. Some (12) ________ driven by malice, some by an uncharacteristic attack of public (13) ________ , some by a desire to curry favour and lessen the (14) ________ of their own wrongdoings, and some by love of treachery (15) ________ intrigue. But usually it's just greed.

Whatever their motives, informers (16) ________ a vital part of the business of catching criminals but (17) ________ play a dangerous game, and changes in the
rules of disclosure over the past two years have made them more than ever. Judgments in the 1st Guinness trial of 1991 (20) the appeal of Judith Ward last year swept away (21) right of the prosecution routinely to withhold information not used (22) evidence because they regarded it as sensitive. 

The reasons for (23) judgments were sound enough - they were intended to avoid future of justice - but the incidental consequences have been grave. Defence (25) now have much more authority to trawl through every of police investigations and this can uncover significant clues to (27) of informants. The consequence is that the informant has become endangered species and at least three people who gave information the Regional Crime Squads have been murdered in the (30) 12 months. Court disclosure has been blamed, if not proved to (31) the cause. We are now in the absurd position where (32) are regularly dropping cases against top grade criminals, many involved (33) violent crime, rather than expose their techniques and sources of (34) . Sixty serious prosecutions have been abandoned in the past (35) Mr Howard, Home Secretary, is currently looking at ways of alleviating (36) problem but so far nothing has materialised. Dropping a case (37) be dangerous in itself, even if you don't name the (38) . As Simon Crawshaw, director of the National Criminal Intelligence Service, (39): 'It tips off the defendants that they had an informer their midst and they will try to find him by (41) process of elimination. With the increased use of violence, that (42) well cost him his life.' Informants are the lifeblood of detection. The bulk of prosecutions against organised criminals and drug (44) rely on inside knowledge. As Crawshaw says: 'If you detection rates are bad, wait and see what happens if (46) situation on disclosure does not improve.'

The informant industry is substantial one. There are currently 2,181 'live' informants registered by (48) Regional Crime Squads alone and 1,263 separate payments were made (49) year. The total payout was in the region (50) 1 million pounds, according to Mr Neil Dickens, national coordinator of the (51). In that period the squads arrested 4,138 people, recovered drugs an estimated street value of 412 million pounds, stolen property worth 30 million pounds and counterfeit currency (53) 40 million pounds. ' (54) informant is the main contributor to those results and must (55) protected,' says Dickens. 'In the last year several of our (56) have lost their lives, mainly in the drugs field where (57) and weaponry are so widely available. ' The detective who runs informants (58) in a murky area and strong external supervision is (59) . There is a temptation for officers to pay rewards to (60) for non-existent information and split the proceeds. Some policemen and (61) informants have allegedly even recruited gangs for robberies, and then (62) on them to claim the reward.
Informant payments today vary (63) _______ the basic 25 or 50 pounds passed over by (64) _______ detective to his 'snout' in the pub to six-figure sums.

(65) _______ large amounts of money can be dangerous and lead to (66) _______ being embellished or the wrong people being accused,' says Crawshaw. (67) _______ best way is to pay little and often to (68) _______ your informant lean and hungry.'

The police themselves would rarely (69) _______ more than 10,000 pounds but larger sums are made up (70) _______ rewards and contributions from loss adjusters, financial institutions and a (71) _______ Home Office fund made up of confiscated criminal assets. Roy (72) _______ , a north London club owner, is reputed to have been (73) _______ Yard's highest paid informant. In the course of a decade (74) _______ is said to have received upwards of 200,000 pounds and to have (75) _______ information leading to the arrests of dozens of high level (76) _______ , before himself being convicted for trafficking in cocaine in 1989 (77) _______ which he is serving a 16 year prison sentence.

Ironically, (78) _______ downfall was brought about by an informant. Garner was not (79) _______ 'supergrass'. That is someone who has been arrested and then (80) _______ on his accomplices; he is repaid with a lighter sentence (81) _______ in solitary but quite comfortable conditions. He is then given (82) _______ new identity and new life elsewhere. He informs once and (83) _______ part of the deal gives evidence in court, so his (84) _______ is not concealed.

ONE of the great advantages of informants (85) _______ highlighted by Geoffrey Dear, HM Inspector of Constabulary, earlier this month (86) _______ he called for an increase in their use. In (87) _______ inspection report for the No 4 (Midlands) Regional Crime Squad (88) _______ said the 47,000 pounds informants' budget for 1993-4 was minuscule (89) _______ compared with the high cost of surveillance operations which could (90) _______ 2,000 pounds a day.

Dickens has taken Dear's advice a (91) _______ further and has authorised the payment of retainers to consistently (92) _______ informers who keep watch on major criminal gangs or families. (93) _______ would be rare and used only in the most serious (94) _______ but we would be paying for intelligence with a view (95) _______ disrupting criminal activities,' says Dickens.

Such a move should also (96) _______ round most disclosure problems, since the information would seldom lead (97) _______ prosecutions until detailed corroboration and further investigation had been completed.

(98) _______ retainers would constitute a proper wage, Dickens said. 'It is (99) _______ use paying him 50 pounds a week to keep close (100) _______ his targets because he may need to go eating or drinking with them to maintain their confidence. I should think we could be looking at 1,000 pounds a month.'

All informants must now be registered in a secure system under their actual names. Only three people would have access to the details - the handler, his immediate controller and his head of department. The handler must record meetings and significant payments must be made from a fund run by headquarters.
It is important to preserve an informant network which has performed a cheap and effective role in crimebusting. The new retainer system is an unknown quantity but if it reinforces a proven technique it will be worth having. It may be unseemly: the notion of paying taxpayers' money to such unsavoury characters sticks in the throat. But it is economical and it works.

A.2 Exact and acceptable answers

The following Table presents all items. In the column marked ‘exact’ the original element is placed. In the column marked ‘acceptable’ the words that were also counted as correct are given.
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RCS, Regional Crime Squads, project, programme, informers, contacts, ammunition, murderers, killers, hitmen, moves, works, necessary, required, crucial, imperatives, inexorable, imperative, necessary, required, crucial, informers, henchmen.
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Samenvatting

1 Inleiding

(1)  a Indeed sometimes the truth is even more bizarre than the myths that grow up around it - like the famous visit to Newcastle in February 1967 of the notorious Kray Twins.  
    c When he joined The Guardian 30 years ago, however, he found it easy to espouse the paper's long-standing philosophy that, if only good men (and women) got together, the world would be a nicer place.

(2)  a However, as will be shown later, after the notion rhythm has been discussed, rather than the kind of song determining the frame of the lyrics, in the case of original poetry being scored, the frame of the lyrics determines the kind of song.  
    b After the downfall of the United Republic, the French era and the United Kingdom, by the end of the nineteenth century the Kingdom of The Netherlands was created.

Het al vaker vastgesteld dat de kwaliteit van een tekst zeer afhankelijk is van de manier waarop een schrijver informatie over de afzonderlijke zinnen verdeeld. Het begin van de zin speelt in deze informatieverdeling een belangrijke rol. Een goed gekozen zinsbegin ondersteunt een coherente ontwikkeling van de tekst en geeft de lezer bij elke volgende
zin in de tekst een gevoel van relevantie en vooruitgang. De elementen die aan het begin van een zin geplaatst worden kunnen dus daadwerkelijk helpen om een tekst beter te begrijpen. Dit proefschrift moet gezien worden in het kader van verrijken van de kennis over de functionaliteit en de onderlinge relaties van de elementen die in dit zinsbegin kunnen voorkomen.

Het onderzoek is gestructureerd op basis van drie gebieden waarin een aantal vragen ondergebracht zijn die gesteld kunnen worden naar aanleiding van de voorbeelden in (1) en (2). De vragen zijn terug te vinden onder (3).

(3) Vragen geformuleerd naar aanleiding van de voorbeelden

I De vorm en functie van complex beginnings
   A Welke soorten complex beginnings komen in het Engels voor?
      - Welke combinaties mogen niet gemaakt worden en waarom niet?
      - In welke volgorde staan de bijwoordelijke bepalingen in een complex beginning?
   B Welke functies vervullen complex beginnings in de context?
      - Hoe helpen ze de lezer de tekst beter te begrijpen?
      - Is er verschil tussen bijvoorbeeld enerzijds de zin *In Britain, however, things are different* en anderzijds de zin *However, in Britain things are different*?

II Complex beginnings geproduceerd door tweede-taalverwervers
   C Produceren Nederlandstalige leerders van het Engels (1e en 2e jaars studenten) net zoveel complex beginnings als moedertaalsprekers? En produceren ze dezelfde soort complex beginnings?
   D Als er verschillen zijn tussen complex beginnings van leerders en van moedertaalsprekers, kunnen die verschillen dan verklaard worden door het verschil in taalvaardigheid, door het verschil in discourse competentie in het algemeen en/of door het verschil in taalspecifieke discourse competentie?

III Het productieproces van complex beginnings
   E Worden alle soorten complex beginnings op dezelfde manier geproduceerd?
   F Zijn er verschillen te ontwaren tussen de manier waarop Nederlandstalige leerders complex beginnings in het Engels produceren en de manier waarop moedertaalsprekers dit doen?
Samenvatting

Voordat deze vragen worden onderzocht wordt eerst, in Hoofdstuk 2, de wat losse definitie van complex beginnings uit Hoofdstuk 1 (i.e. complex beginnings zijn combinaties van twee of meer bijwoordelijke bepalingen aan het begin van de zin), nader gespecificeerd. Zo wordt onder andere vastgesteld welke elementen als bijwoordelijke bepalingen beschouwd worden (voegwoorden en conjuncts die aan het begin geplaatst moeten worden, zoals yet, so, worden niet onderzocht; niet-beperkende bijzinnen van tijd en plaats en andersoortige conjuncts zoals however, for example worden wel onderzocht); wanneer een serie van elementen beschouwd wordt als twee afzonderlijke bijwoordelijke bepalingen, zoals in de voorbeelden in (1), in plaats van als één complexe bepaling, zoals getoond in (4); en welk gebied van de zin als zinsbegin wordt beschouwd (alles vanaf het begin van de zin tot het eerste verplichte element van de declaratieve zin; in het Engels is dat het grammaticale onderwerp; in het Nederlands de persoonsvorm). Deze laatste discussie onthulde interessante consequenties voor de beschrijving van het zinsbegin in zowel Functionele Grammatica (Dik 1989, 1997a, 1997b, Hengeveld 1989, 1990) en Systemic Functional Grammar (Halliday 1994). Deze zullen besproken worden in Sectie 2.

(4) a In the 18th century, supposedly a period of total darkness, sentencing authorities had a wide choice.
    b In a muddy field near Vukovar they are investigating a war crime.

2 De vorm en functie van complex beginnings

Als uitgangspunt voor de zoektocht naar specifieke volgordes (en de betekenis van die volgordes) in complex beginnings onderzocht Hoofdstuk 3 de traditionele beschrijvingen van de relatieve volgorde van bijwoordelijke bepalingen. De eerste beschrijving is gebaseerd op grammaticale realisatie van de bepalingen. Een voorspelling die daaruit voorvolgde is bijvoorbeeld ‘bijwoorden gaan vooraf bijzinnen’, zoals in (5a). Een andere beschrijving baseert zich op een volgorde in termen van semantische functie, bijvoorbeeld ‘bepalingen van plaats gaan vooraf aan bepalingen van tijd’ (zie het voorbeeld in 5b). Een laatste beschrijving baseert zich op de mate van integratie in de zin. In die benadering worden representationele bepalingen (zoals makkelijk, gisteren, in Amsterdam) beschouwd als meer geïntegreerd in de zin dan interpersoonlijke bepalingen (zoals volgens mij, eerlijk gezegd,

(5) a Unfortunately, because we missed the train, we never made it to the conference.
   b In Britain today things are different.
   d In Britain, however, things are different.
   e However, in Britain things are different.

Alle voorspellingen zijn getest op een database van 496 complex beginnings verzameld in een Engels corpus bestaand uit ongeveer 500.000 woorden. Het bleek dat voor elk van de voorspelde volgordes voorkwam, maar tegelijkertijd bleek dat in ongeveer de helft van de complex beginnings de tegenovergestelde volgorde ook voorkwam. Het was duidelijk dat geen van deze eigenschappen voldoende zou zijn om complex beginnings goed te kunnen beschrijven. Hoofdstuk 4 stelt derhalve een ander middel voor waarmee complex beginnings kunnen worden geclassificeerd, namelijk ‘de relatie van de tweede bijwoordelijke bepaling ten opzichte van de eerste bijwoordelijke bepaling’. Met andere woorden, hoofdstuk 4 onderzoekt bijvoorbeeld de relatie tussen In Britain en however in de zin In Britain, however, things are different en tussen In France en last year in In France last year something terrible happened. Het bleek dat alle complex beginnings in twee groepen uiteen vielen, namelijk die complex beginnings waarin de tweede bijwoordelijke bepaling geen relatie met de eerste bepaling had en die complex beginnings waarin dat wel zo was. Als er wel een relatie was, dan gaf, in het algemeen, de tweede bepaling een aanwijzing aan de lezer over hoe de eerste bepaling gelezen moest worden (grounding). Met andere
woorden, de tweede bepaling relateert de eerste bepaling aan een entiteit die in de context relevant is. Neem als bijvoorbeeld het fragment in (6):

(6) On the mainland, too, the 'new right' has allowed its mask to slip. The neo-Fascists' leader, Mr Fini, with his glasses and air of a young professor, could not be further from the textbook neo-Fascist. Indeed, during the election campaign he shunned the word fastidiously. Yet this shrewd operator treads a fine line between reassuring the public and throwing morsels of ideology to his rank and file. On Friday, Mr Fini's mask slipped when he sang the praises of Mussolini to La Stampa. Mr Berlusconi, he said, would have his job cut out to match the achievements of Mussolini. On Monday night, [when the votes were in the bag], young neo-Fascist bloods deliriously gave the fascist salute and fought police in central Rome.

In dit fragment helpt when the votes were in the bag de lezer om het vechten-en-salueren te plaatsen (wanneer, waar, waarom). Die gebeurtenis vindt pas plaats nadat de stemmen binnen zijn en de referentie aan stemmen relateert de rellen op het plein aan de verkiezingscampagne waar eerder sprake van was. On Monday night helpt ook om het vechten en salueren te plaatsen, maar stel dat On Monday night dat alleen had moeten doen, dan was de lezer niet helemaal duidelijk geworden waarom deze zin aan de tekst was toegevoegd. Feitelijk geeft when the votes were in the bag een antwoord op de vraag ‘Waarom hebben we het nu opeens over Maandagavond? Waarom is die avond relevant?’ In die zin relateert de tweede bepaling ook de eerste bijwoordelijke bepaling aan een entiteit die relevant is in de context. Zo een relatie kan bijvoorbeeld niet vastgesteld worden voor een zin als in (7):

(7) On the St Petersburg waterfront, if you don’t pay off the right people you may find that the crane operator will drop your cargo in the water.

Als voor die zin gevraagd wordt ‘Waarom hebben we het nu opeens over St. Petersburg? Waarom is St. Petersburg relevant?’ dan is het minder logisch om te antwoorden ‘Als je niet aan de juiste personen smeergeld betaalt…’
Uiteindelijk bleek dat de twee groepen die onderscheiden werden op basis van de relatie tussen bepaling 2 en 1 in vijf subgroepen in totaal onder te verdelen. Elk type wordt apart behandeld in (8)-(12):

(8) **Stepwise orientation**  
In een *stepwise orientation* vormen de tweede bepaling (sat2 in de tekening) en de zin (main clause) een eenheid en geeft de eerste bepaling een oriëntatie op die eenheid. De tweede bepaling heeft geen relatie met de eerste bepaling. In totaal zijn 39% van alle complex beginnings van dit type. Voorbeelden zijn:

a. *However, in Britain* things are different  
b. *Although scientists have long recognized the importance of adhesive interactions in the body, until recently* they knew little about how such interactions exert their diverse effects on physiology.

(9) **Compound orientations**  
In een compound orientation verzorgen zowel de eerste als de tweede bepaling een oriëntatie op hetzelfde element in de zin. Dit kan bijvoorbeeld het onderwerp zijn (zoals in het voorbeeld), maar ook andere elementen kunnen geselecteerd worden door de bepalingen. Slechts 3% van alle complex beginnings zijn te classificeren als compound orientations.  

vb. *Stripped of his Army rank, hair falling over his collar,* Anthony Dryland presents an unlikely figure of retribution.

(10) **Grounded orientations**  
In een grounded orientation verzorgt de tweede bijwoordelijke bepaling een orientation voor de hoofdzin, maar geeft het tegelijkertijd een aanwijzing over hoe de eerste bepaling in de tekst moet worden geplaatst, of wordt de eerste bepaling nader gespecificeerd. Ongeveer 34% van alle complex beginnings zijn grounded orientations.  

vb. *Later, with England converted to Christianity,* the daughters of the great Anglo-Saxon noblemen were sent abroad to France to be educated in the Christian and classical mode.

(11) **Complex orientations**  
In een complex orientation vormen de tweede en de eerste bepaling samen een eenheid. Als eenheid verzorgen ze dan een oriëntatie op de hoofdzin (het verschil met een grounded orientation is dus dat in dat geval de tweede bepaling onafhankelijk van de eerste een
oriëntatie op de hoofdzin verzorgde). 18% van alle complex beginnings zijn complex orientations.

vb By the early 1970s, however, this attitude was changing

(12) Composite orientations

In een complex orientation vormen de tweede en de eerste bepaling ook samen een eenheid. Het verschil met een complex orientation is dat het tweede element in deze complex beginnings niet als parenthetisch element beschouwd kan worden. 5% van alle complex beginnings zijn composite orientations.

vb Two years ago in Dublin I said if you don’t have something that is perceived to be inclusive you’ve had it.

Nadat alle complex beginnings konden worden onderverdeeld bleek dat ook complex beginnings die uit meer dan twee bepalingen bestaan in deze typologie onder te brengen waren. Bovendien werd een verklaring geleverd voor de reden dat complex beginnings als in de voorbeelden in (2) minder acceptabel zijn

Hoofdstuk 5 is vervolgens op zoek gegaan naar de verschillende functies van de vijf types. De hoofdvraag die bij elk voorbeeld opnieuw gesteld werd was ‘Waarom heeft de schrijver voor deze volgorde gekozen?’ Bijvoorbeeld, ‘Waarom wordt kiest een schrijver van een bepaalde tekst voor de volgorde However, if such a view becomes the orthodoxy, in plaats van voor If such a view becomes the orthodoxy, however? Of waarom kiest zij voor That night at church in plaats van voor At church that night? Analyse van de context van deze voorbeelden toonde aan dat in het algemeen de eerste bijwoordelijke bepaling verantwoordelijk was het voortzetten van een Text-Strategic Continuity (TSC) (Virtanen 1992), terwijl de tweede bepaling dan vaak niet in die TSC functioneerde. Beschouw als voorbeeld het fragment in (13) (‘---’ geeft aan dat een deel van de tekst is weggelaten).

(13) When we got home my father was watching television. It was the match between ‘Crusher Williams’ and one-eyed Jonney Scott. My mother was furious; --- 
That night at church we had a visiting speaker, Pastor Finch from Stockport. He was an expert in demons, and delivered a terrifying sermon on ---

After the service we were having a banquet; my mother ---
De tekst in (13) is als geheel gestructureerd op basis van bepalingen van tijd. De complex beginning in deze tekst bestaat uit een bepaling van tijd gevolgd door een bepaling van plaats. Met andere woorden, het eerste element van het complex beginning ondersteunt de strategie waarmee de rest van de tekst geordend wordt. Nu de elementen in deze volgorde zijn geplaatst zorgt de complex beginning er dus voor dat de zin goed in de context past. De vermoedens dat volgorde in complex beginnings gedreven wordt door de context wordt bevestigd op basis van een analyse van de context van 45 random-geselecteerde complex beginnings.

Een gevolg van deze analyse van complex beginnings is dat de traditionele manier waarop de zinsopening beschreven wordt in Functionele Grammatica niet lijkt te voldoen. De P1/P2 structuur, die onderscheid maakt tussen intra-clausale en extra-clausale elementen, gaat voorbij aan de verschillende manieren waarop de bijwoordelijke bepalingen in relatie tot elkaar en de hoofdzin kunnen staan. Bovendien veronderstelt dat onderscheid dat elementen in P2 zich anders gedragen dan elementen in P1. Daar is geen ondersteuning voor gevonden. Als alternatief stelt Hannay (2001) de volgende structuur voor:


Op de M-posities komen dan bepalingen die de voorgaande bepalen verankeren (grounding) terwijl op de O-posities bepalingen komen die een oriëntatie op de hele zin geven. Hoewel deze beschrijving nog altijd een aantal problemen herbergt lijkt het zoeken van een antwoord in deze richting veelbelovend.

3 Complex beginnings geproduceerd door tweede-taalverwervers

De belangrijkste vragen wat betreft complex beginnings geproduceerd door Nederlandstalige leerders van het Engels waren (1) ‘Produceren Nederlandstalige leerders van het Engels (1e en 2e jaars studenten) net zoveel complex beginnings als moedertaalsprekers?; (2) En produceren ze dezelfde soort complex beginnings? (3) Als er verschillen zijn tussen complex beginnings van leerders en van moedertaalsprekers, kunnen die verschillen dan verklaard worden door het verschil in taalvaardigheid, door het verschil in discourse competentie in het algemeen en/of door het verschil in taalspecifieke discourse competentie?
Hoofdstuk 6 beantwoordde de eerste twee vragen met behulp van een corpus van Engelse teksten geproduceerd door Nederlandstalige leerders (LEC). Vergelijking van de complex beginnings die in dit corpus werden aangetroffen met de complex beginnings uit het moedertaalcopus (NEC) leverde de volgende resultaten op: (a) leerders produceren meer complex beginnings dan moedertaalsprekers; (b) leerders produceren meer stepwise orientations dan moedertaalsprekers; (c) leerders produceren minder van alle andere soorten complex beginnings (compound orientations, grounded orientations, complex orientations, composite orientations); (d) meer in het bijzonder: leerders produceerden meer stepwise orientations van het type ‘retorisch-representatieeel’, zoals *However, in Britain they soldiered on* (moedertaalsprekers produceerden ook vaak ‘representatieeel-representatieeel’ combinaties in de categorie ‘stepwise orientation’, zoals *Despite these difficulties, in Britain they soldiered on*). In hoofdstuk 7 werd vervolgens onderzocht in hoeverre de factoren language competence, discourse competence (algemeen en taalspecifieke), en de schrijfprocessen van de twee groepen de verschillen zou kunnen verklaren.

Wat betreft language competence werd gesuggereerd dat de verschillen tussen Engelse en Nederlandse grammatica van de zin taalleerders er toe zou kunnen verleiden hun zin zo op te bouwen dat ze eerst beginnen met het plaatsen van de retorische bepaling (*however*), daarna proberen om hun andere bijwoordelijke bepalingen kwijt te kunnen, om dan vervolgens hun volledige aandacht te kunnen wijden aan het correct construeren van de kern van de boodschap (inclusief zorgen over werkwoordsvormen, gebruik van goede woorden, etc.):

\begin{verbatim}
(15)   However
       However, in the Netherlands
       However, in the Netherlands they do things differently.
\end{verbatim}

Dit werd de *language competence hypothesis* genoemd.

moedertaalsprekers: leerders bleken hun zinnen vaker met retorische bepalingen te beginnen dan de andere schrijvers. Deze bevindingen leidden tot de *discourse competence hypothese*, die inhield dat het verschil tussen LEC en NEC complex beginnings het resultaat was van verschil in algemene discourse competence (i.e. de schrijvers van de teksten in de LEC hadden niet zozeer minder schrijfervaring in het Engels, maar minder schrijfervaring in het algemeen).

Samenhangend met deze hypothese werd gesteld dat de verschillen misschien het gevolg waren van de verschillende schrijfprocessen die de beide groepen toepasten. In meerdere schrijftheorieën worden verschillen verondersteld tussen hoe beginnende schrijvers en ervaren schrijvers een tekst produceren. Verder wordt er ook gesuggereerd dat taalleerders (ook als ze in hun eigen taal ervaren schrijvers zijn) zich, al schrijvend in een vreemde taal, meer als beginnende schrijvers opstellen. Er wordt verondersteld dat leerders en onervaren schrijvers zich voornamelijk bezighouden met het simpelweg vertellen van de informatie die ze hebben, terwijl meer ervaren schrijvers de informatie nog bewerken voor hij wordt verteld (daarmee soms nieuwe informatie creërend). Een van de resultaten van dit verschil zou kunnen zijn dat onervaren schrijvers minder flexibel zijn als het gaat om de manier waarop de informatie gecodeerd wordt. Onervaren schrijvers zouden dan bijvoorbeeld informatie over de locatie vaker in een bijwoordelijk bepaling gieten, terwijl ervaren schrijvers misschien kiezen voor een compactere oplossing waarin zulke informatie geïntegreerd wordt in andere onderdelen van de zin: *In the ER, a patient tried to wreck a room* wordt dan *An ER-patient tried to wreck a room*. Dit werd de *writing process hypothese* genoemd.

Een exploratief empirisch onderzoek beschreven, beschreven en gerapporteerd in Hoofdstukken 8 en 9, levert de volgende informatie op. Wat betreft de overproductie van complex beginnings in het algemeen konden geen uitspraken worden gedaan. Leerders produceerden in de meeste taken net zoveel complex beginnings als moedertaalsprekers deden en hetzelfde gold voor de vergelijking tussen onervaren en ervaren schrijvers. Een reden zou kunnen zijn dat in de meeste items de proefpersonen hadden weinig vrijheid wat betreft zinselementen. De zinsdelen werden aangereikt en er was geen gelegenheid om informatie te coderen in andersoortige zinselementen (een bijwoordelijke bepaling bleef een bijwoordelijke bepaling en een schrijver kon er niet voor kiezen de informatie in de bijwoordelijke bepaling the integreren in bijvoorbeeld
het onderwerp: *In the ER a patient wrecked a room* zou in zo een geval *An ER patient wrecked a room* kunnen worden.

Verder lijkt dit experiment uit te wijzen (maar meer onderzoek is nodig, want – zoals eerder gezegd het is een exploratief onderzoek) dat de overproductie van stepwise orientation in het leerderscorpus het resultaat is van *discourse competence/writing experience*. Deze conclusie is het gevolg van het feit dat een vergelijking tussen resultaten van leerders (ervaren en onervaren schrijvers) en van moedertaalsprekers (ook ervaren en onervaren schrijvers) geen verschillen oplevert, terwijl een vergelijking tussen resultaten van onervaren schrijvers (leerders en moedertaalsprekers) en ervaren schrijvers (ook leerders en moedertaalsprekers) voor meerdere items een overproductie van stepwise orientations en een onderproductie van complex orientations suggereerde. Onderzoek naar de interactie tussen de factoren *language competence* en *discourse competence* leverde geen verschillen op en het lijkt er dus op dat het verschil niet te wijten is aan taalspecifieke discourse competentie, maar aan algemene discourse competentie. Dit resultaat ondersteunt de discourse competence hypothese.

Het is echter niet zo *language competence* helemaal geen rol speelt. Vergelijking van de resultaten tussen de taken onderling lijkt er op te wijzen dat zodra een taak complexer wordt, de leerders meer moeite hebben met het produceren van de meest adequate zinsopeningen. Bijvoorbeeld in de Judgment Task (het beoordelen van zinnen) verschillen hun resultaten niet van moedertaalsprekers, maar in taken waarin ze zelf iets moesten produceren werden de verschillen met moedertaalsprekers allengs groter. Een interessante observatie in dit verband is het feit dat leerders minder coherente relaties tussen de verschillende zinnen maken als ze korte tekst moeten schrijven. Aangezien stepwise orientations over het algemeen een locale link tussen twee eenheden leggen terwijl complex orientations en grounded orientations meer functioneren in strategieën die grotere eenheden structureren, kan het zijn dat als leerders een echte schrijftaak uitvoeren (en niet de sterk uitgeklede taken in het experiment) *language competence* toch een rol speelt in de overproductie van stepwise orientations. Dit zal nader onderzocht moeten worden.

Een laatste resultaat verdient nog vermelding. Terwijl moedertaalsprekers in de Unscrambling Task elk item op een andere wijze benaderde (bijvoorbeeld wat betreft eerst gekozen zinsellement en wat betreft zinsopening die uiteindelijk geproduceerd werd), neigden de
leerders ernaar om voor elk item dezelfde oplossingstrategie te hanteren. Dat wil zeggen, de gemiddelde moedertaalspreker produceerde verschillende zinsopeningen voor de verschillende items (bijvoorbeeld, een stepwise orientation, een complex orientation en nog een andere zinsopening). De gemiddelde leerder produceerde een vergelijkbare zinsopening voor de verschillende items (bijvoorbeeld drie stepwise orientations, etc).

Dit experiment liet de onderzoeker echter met veel vragen achter. De belangrijkste reden was dat de taken die het meest leken op het daadwerkelijke schrijfproces de minste informatie over complex beginnings opleverden (omdat de proefpersonen andere oplossingen zochten om de boodschap te coderen). In hoofdstuk 9 worden derhalve ook nog een aantal suggesties voor verder onderzoek gedaan.

4 Het productieproces van complex beginnings

De vragen die met betrekking tot het productieproces van complex beginnings relevant leken waren (a) Worden alle soorten complex beginnings op dezelfde manier geproduceerd? en (b) Zijn er verschillen te ontwaren tussen de manier waarop Nederlandstalige leerders complex beginnings in het Engels produceren en de manier waarop moedertaalsprekers dit doen?

De eerste vraag was gedeeltelijk geïnspireerd door Halliday’s claim dat een retorische-interpersoonlijke-representationele volgorde de meest natuurlijke volgorde. Dit impliceert bijna dat als een schrijven een complex orientation produceert (de volgorde in deze zinsopeningen is meestal representatiedeel-retorisch of representatiedeel-interpersoonlijk), de constructie via een stepwise orientation is gegaan. Tot op zekere hoogte lijkt Halliday gelijk te hebben. Als zinnen los van een context worden geproduceerd (context), zijn stepwise orientations veruit het meest populair. In het echte leven worden zinnen echter zelden los van een context geproduceerd en de analyses van de protocollen die tijdens het experiment verzameld zijn duiden er ook niet op dat een complex orientation geproduceerd wordt via een stepwise orientation. Dit betekent dat er niet vastgesteld kan worden dat de ene volgorde ‘natuurlijker’ zou zijn dan de andere volgorde.
5 Conclusies

Deze studie heeft wat betreft de vorm van complex beginnings uitgebreid aangetoond dat de relatieve volgorde van de bijwoordelijke bepalingen in deze constructie niet goed beschreven kan worden met behulp van principes die enkel gebaseerd zijn op de grammaticale realisatie, de semantische functie of de mate van integratie in de zin. In plaats daarvan wordt gesteld dat de relatieve volgorde van de bijwoordelijke bepalingen in een complex beginning beschreven moet worden met behulp van de relatie tussen de tweede bijwoordelijke bepaling en de eerste bijwoordelijke bepaling en met behulp van de manier waarop de tweede bijwoordelijke bepaling een relatie creëert met de clause. Deze manier van analyseren levert een classificatie van complex beginnings in stepwise orientations, grounded orientations, complex orientations en composite orientations. Eén van de belangrijkste voordelen van dit systeem om complex beginnings in te delen is de mate waarin regelmatigheden verklaard kunnen worden. Bijvoorbeeld, in Hoofdstuk 4 is aangetoond dat per soort complex beginning opeens wel regelmatigheden te ontwaren zijn voor wat betreft grammaticale realisatie, semantische functie en mate van integratie in de zin. Met behulp van de relatie tussen de eerste en de tweede bijwoordelijke bepaling zijn die regelmatigheden te verklaren. Bijvoorbeeld, de manier waarop de tweede bijwoordelijke bepaling relevantie verleent aan de eerste bijwoordelijke bepaling in een grounded orientation verklaart dat in deze soort complex beginning de tweede bijwoordelijke bepaling vaak gerealiseerd wordt met behulp van een clause (een clause kan makkelijker diverse concepten aan elkaar relateren dan, bijvoorbeeld, een representationele bijwoord).

Wat betreft de functie van complex beginnings is in hoofdstuk 5 uitgebreid aangetoond dat complex beginnings ingezet worden om een tekst te structureren. De voornaamste strategie is dat de eerste bijwoordelijke bepaling van een complex beginning in de text-strategic continuity (TSC) functioneert, terwijl de tweede bepaling dan óf relevantie verleent aan de eerste bepaling, óf zelf een locale TSC begint. Het is ook aangetoond dat minder effectief gebruik van de discourse functies van complex beginnings ervoor kan zorgen dat een tekst minder goed loopt. Er worden dan bij de lezer verwachtingen gewekt over hoe de tekst verder gaat die niet opgevolgd worden. Het is dus essentieel dat een taalgebruiker weet hoe een complex beginning haar pogingen om een
goed lopende tekst te construeren kan ondersteunen. Dit geldt voor moedertaalsprekers zowel als voor leerders.

Wat betreft dit leerdersperspectief op complex beginnings is aangetoond dat Nederlandstalige leerders van Engels inderdaad meer moeite hebben dan moedertaalsprekers met het produceren van complex beginnings. Zij herkennen bijvoorbeeld minder snel een minder acceptabel voorbeeld van een complex beginning als zodanig (hoewel ze uiteindelijk gegeven meer tijd en geven het feit dat hun aandacht op de constructie gevestigd wordt hun oordeel niet meer verschilt van moedertaalsprekers).

De andere verschillen in complex beginnings gevonden in het leerderscorpus tussen complex beginnings gevonden in het moedertaalcorpus (bijvoorbeeld overproductie van stepwise orientations door leerders) lijken veroorzaakt te worden door het feit dat de teksten in het leerderscorpus geproduceerd zijn door minder ervaren schrijvers dan de teksten in het moedertaalcorpus, met andere woorden een verschil in discourse competence dan in language competence. Bij deze laatste conclusie moet echter aangetekend worden dat de resultaten vertekend zouden kunnen zijn door de specifieke aard van de taken die de proefpersonen moesten uitvoeren (zie Hoofdstuk 8 voor een beschrijving). Meer onderzoek is nodig om de invloed van beide factoren te achterhalen.
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