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OBSERVATIONS ON THE DEVELOPMENT OF
THE TOPIC IN SIMPLIFIED DISCOURSE

As readers, we have certain expectations about the way written texts are structured. To form a coherent piece of discourse a text must be a meaningful whole, or, in other words, it must have properties that make possible "a dynamic process of meaning creation" (Widdowson 1977). We expect sequences making up a piece of discourse to be related, however indirectly, to the main idea discussed, here referred to as discourse topic. This relation may be direct, especially in short texts, or indirect, based on the development of subordinate ideas, subtopics, which in their turn relate to the discourse topic. The development of the discourse topic within an extensive piece of discourse may be thought of in terms of a succession of hierarchically ordered subtopics, each of which contributes to the discourse topic, and is treated as a sequence of ideas, expressed in the written language as sentences. We know little about

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restrictions concerning the relationship between sentences and subtopics, but it seems likely that most sentences relating to the same subtopic form a sequence. The way the written sentences in discourse relate to the discourse topic and its subtopics is here called topical development of discourse. In this paper, some aspects of topical development in written discourse will be examined in the light of a comparison of a text and its simplified versions. The term simplification of written discourse is here used to refer to the rewriting of texts with the intention of making them more readable or more easily comprehensible. As such, simplification is practised widely as a legitimate method of language teaching and material production. It is mainly carried out in terms of simplification of vocabulary and syntactic structures (Mountford 1975: 35 ff; see also Wikberg, in this volume), but less is known about changes in discourse features, e.g., intersentential linkage or the development of the discourse topic, which this paper attempts to clarify. - However, the effect on readability of intuitive simplification will be outside the scope of this paper.

1. TOPICAL DEVELOPMENT IN WRITTEN DISCOURSE

There seems to be a fairly general agreement that in English, sentences in discourse usually function in approximately the following way. The subject of an individual sentence is generally the element representing "what the sentence is about" (esp. Chafe 1976), "announcing the topic rather than offering new information about the chosen subject-matter" (Turner 1973: 315). Thus sentences in discourse can be thought of as contributing to the development of the discourse topic by means of sequences that first develop one subtopic, adding new information about it in the predicate of each sentence, and then proceed to develop another. It has been suggested that there are two general

types of this progression, here called topical progression. In one type, the subtopic in a number of successive sentences is the same, a case that has been called parallel progression. In the other type, called sequential progression, the predicate, or the rhematic part of one sentence, provides the topic for the next.¹ Starting with these concepts, i.e., that the subject of a sentence is usually an element representing its topic, and that the development of a discourse topic or subtopic takes place in terms of successive sentences relating to it, we shall examine the role of subject in topical development by analysing an arbitrarily chosen piece of authentic, informative written discourse, quoted below on p. 78

First, however, we have to define the concept of subject, as well as some other concepts. Examples used as evidence in discussions on the relationship of subject and topic are usually of the type

(1) John is running.

In this sentence, the subject combines three properties which are kept apart in this paper: it is structurally in the position of the subject in a thematically unmarked affirmative clause, it is a lexical subject as opposed to a mere structural dummy, and it is the psychological subject of the clause in the sense that it represents what the clause is about. In this paper we shall be dealing only with subjects which are, first, in the position of the subject, and referred to here as mood subjects.² Further, we shall make the distinction between mood subjects which are structural dummies, such as there in an existential clause, and lexical or notional subjects. If a lexical subject relates directly to the discourse topic, we shall call it the topical subject, while subjects which are not directly related to the discourse topic are called non-topical subjects. The following sentence will illustrate this distinction:

(2) Biologists suggest that new-born children are ...
This sentence comes from a piece of text which has the

discourse topic new-born children. Here the subject of the subclause is the topical subject of the sentence, while the subject of the main clause is non-topical. - Thus, in this paper, the term topic has not been used in the sense of a topicalised or fronted element (cf. Enkvist 1976: 64-65). It occurs in the term discourse topic, which refers to the idea discussed, in the term subtopic, referring to a subordinate idea relating to discourse topic, and in the term topical subject, i.e., a mood subject relating to the discourse topic.

Let us go back to sentences like (1). A sequence of such sentences, with a topical mood subject, and with anaphoric reference substituting the lexical items, would give a piece of discourse like the following.³

- (3) New-born infants are completely helpless.
- (4) They can do nothing to ensure their own survival.
- (5) They are different from young animals.
- (6) Young animals learn very quickly to look after themselves.

In the artificial piece of text created by (3)-(6) the first three sentences represent the parallel type of topical progression, with the topical subjects having the same referent. In sentence (6) another subtopic appears, represented by the topical subject young animals. It is first introduced in the rhematic part of (5), and thus represents the sequential type of progression.

In authentic discourse, however, matters are more complicated. First, it may consist of complex sentences of many types, with different subjects in different parts of the sentences. Secondly, the subject of the main clause need not be the topical subject, i.e., it need not represent the discourse topic, and, thirdly, the main clause may be thematically marked. A sentence could, in authentic discourse, have any of the following structures, among others:

- (7) Biologists suggest that new-born children are helpless.
- (8) There are many new-born children who are helpless.

- (9) It is clear that new-born children are helpless.
 (10) I doubt whether new-born children are helpless.
 (11) Although new-born children are helpless, biologists suggest that ...

It is obvious that the relationship of the mood subject and the discourse topic is more complicated in authentic discourse than in isolated sentences of the type discussed in (3)-(6). In none of sentences (7)-(11) could the mood subject of the main clause be called the topical subject of the sentence, providing that we are dealing with the discourse topic new-born children. In fact, if we compare sentences (7)-(11) to (3)-(6), we observe that the discourse topic is not referred to within the main clauses of (7)-(11) at all. Rather, the discourse function of these main clauses is non-topical, i.e., they are not directly related to the discourse topic. It is in the subclauses that the topical subject appears in each example.

Before proceeding, therefore, we shall have to look more closely at different types of discourse material since they often form an essential part of the organisation of informative discourse.

Non-topical linguistic material is important to the discourse in several ways. First, we can distinguish linguistic material which is used to organise the subject-matter for the purposes of the particular presentation. This organisation, which may also be achieved by means of thematic arrangement and intersentential order, may be signalled by linguistic items indicating order, or by logical connectors like consequently, however, etc. This kind of linguistic material will here be called discourse connectives.⁴ Secondly, there may be material which is used to make explicit the illocutionary force of the statement concerned, i.e., whether it is a description, a claim, a hypothetical statement, etc. Examples of this material, here called illocution markers, are for example, to illustrate the point, etc. Apart from these, the writer may indicate the truth value of the information he discusses

by using expressions like it seems probable, or obviously. These will be called modality markers, and are considered to include references to authorities, such as biologists suggest, as well as to the writer's own commitment, e.g., I doubt whether. Fourth, the writer may make explicit his own attitude to what he is discussing by using attitude markers such as I would like to, It seems futile to, etc. Material used to comment on the discourse itself may be metalinguistic, i.e., may refer to the language of the text, or, as Enkvist points out, metatextual, i.e., refer to the properties of the organisation of the text itself (Enkvist 1975: 115), e.g., Next, we shall discuss ..., or, In later chapters I will attempt to ... And finally, the writer may approach the reader directly by commenting on what or how to read, etc. Such material could be called commentary.

Some of the types of discourse material mentioned above serve the internal organisation of discourse, e.g., discourse connectives and metatextual markers, while some, like illocution markers and modality markers, help the reader to relate the content matter to a larger framework of knowledge. The topical material is the basic material, while the others form a framework for it, separate, and subsidiary in importance. The following example from the text will illustrate this interplay of discourse materials:

- (12) For this reason, biologists now suggest
 that language is species specific ... to the
 human race ...

Here the main clause is a modality marker, while the topical material appears in the subclause. This example introduces one more variant to be discussed in this paper, that is, the ordering of the discourse materials which appear within a sentence.

We do not know much about the order of the various discourse materials within sentences in authentic discourse. Formally, we may distinguish between full clauses and verbless adjuncts, but this distinction need have no

one-to-one correspondence with the type of discourse materials. Thus, in the following example, the modality marker appears in the main clause in (13), in the subclause in (14), and as a sentence adjunct in (15):

(13) Biologists suggest that new-born children ...

(14) As biologists suggest; new-born children ...

(15) Obviously, new-born children ...

In all of these sentences the initial element in the sentence, whatever its form, is a modality marker, while the actual topical material appears in the following clause. In this paper, the term initial sentence element (ISE) will be used to refer to the initially placed discourse material in sentences, whatever its form or type.

In the following we shall first examine the various combinations of the mood subject of the main clause, of the topical subject, if different from the mood subject, and of the ISE or initial sentence element. We shall then examine how they are used within a piece of authentic discourse to accommodate different types of discourse material and at the same time to serve the development of the discourse topic. These combinations of the mood subject, topical subject, and ISE will here be called topical structures. Where clauses are concerned, we shall be dealing with subjects rather than with full clauses in order to be able to follow the topic in terms of the topical subject.

1.1. Topical structures in authentic discourse

Let us now examine the text to be analysed, first only to locate the topical subjects of the sentences. For ease of reference, and because it is possible to establish the topical subject of a sentence with several subjects only by examining the context of the sentence, the text as a whole is quoted on p. 78, and its sentences are numbered for reference. In this paper, the original, authentic text is referred to as OT.

ORIGINAL TEXT (OT)

¹When a human infant is born into any community in any part of the world it has two things in common with any other infant, provided neither of them has been damaged in any way either before or during birth. ²Firstly, and most obviously, new born children are completely helpless. ³Apart from a powerful capacity to draw attention to their helplessness by using sound there is nothing the new born child can do to ensure his own survival. ⁴Without care from some other human being or beings, be it mother, grandmother, sister, nurse, or human group, a child is very unlikely to survive. ⁵This helplessness of human infants is in marked contrast with the capacity of many new born animals to get to their feet within minutes of birth and run with the herd within a few hours. ⁶Although young animals are certainly at risk, sometimes for weeks or even months after birth, compared with the human infant they very quickly develop the capacity to fend for themselves. ⁷It would seem that this long period of vulnerability is the price that the human species has to pay for the very long period which fits man for survival as species.

⁸It is during this very long period in which the human infant is totally dependent on others that it reveals the second feature which it shares with all other undamaged human infants, a capacity to learn language. ⁹For this reason, biologists now suggest that language is 'species specific' to the human race, that is to say, they consider the human infant to be genetically programmed in such a way that it can acquire language. ¹⁰This suggestion implies that just as human beings are designed to see three-dimensionally and in colour, and just as they are designed to stand upright rather than to move on all fours, so they are designed to learn and use language as part of their normal development as well-formed human beings.

(Anne and Peter Doughty, Language and Community, Edward Arnold, London 1974)

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In this text, all sentences contain a noun in the subject position representing the discourse topic. These nouns can thus be considered the topical subjects. They are underlined in the text. Further, all five possible combinations of the mood subject of the main clause, of the topical subject and of ISE appear in the text. We shall start by looking at cases where the mood subject of the main clause, referred to briefly as the mood subject, is also the topical subject, which are structurally the simplest types.

Type 1. Initial sentence element, mood subject and topical subject coincide

This is the type of sentence that was discussed above as a context-free "example-sentence" of the type John is running. In the text, which has ten sentences in all, there is one case of this type:

- This helplessness of human infants is in marked contrast ... OT/5

Here the modifiers tie the topical subject with the previous subtopic.

Type 2. Initial sentence element is separate from mood subject and topical subject, which coincide

In the two cases of this type which appear in the text, ISE is either a topical adjunct⁵, as in

- Without care from some other human being or beings ...
a child is very unlikely to survive. (4)

or non-topical, as in the second case:

- Firstly, and most obviously, new born children are completely helpless. (2)

Here ISE consists of a discourse connective, and is followed by a modality marker.

While the above types present a fairly straightforward picture, with the topical subject coinciding with the mood subject, and thus appearing in a syntactically prominent position, most of the sentences of the text have a non-topical mood subject in the main clause, while the topical subject appears outside the main clause.

Type 3. Initial sentence element and mood subject coincide while topical subject is separate.

There are two subtypes of type 3 in the text. In the first, 3a, the mood subject of the initial main clause is a dummy, with the main clause representing topical material. One case of this kind occurs.

- It is during this very long period in which the human infant is totally dependent on others that it reveals ... (8).

This sentence begins the second paragraph of the text. Its ISE summarises an idea developed in the previous paragraph, that is, the previous subtopic, and in this way links it with the topical subject represented by the lexical human infant and the anaphoric it.

In the other variant, 3b, the initial main clause is non-topical, while the topical subject appears in a following sub-clause. There are two cases of this kind, both with the main clause serving as a modality marker:

- It would seem that this period ... is the price that the human species has to pay ... (7)⁶
- This suggestion implies that just as human beings are designed ... so they are designed ... (10)

Type 4. Initial sentence element and topical subject coincide, while mood subject is separate.

The two cases of this type appearing in the text both have the topical subject in an initial subclause, with a cohesive anaphoric pronoun as the mood subject.

The examples are the following:

- When the human infant is born ... it has two things ... (1)
- Although young animals are at risk ... they very quickly develop ... (6)

This structure serves to introduce or change the topical subject. The first case is the first sentence in the text, and the second case introduces a subtopic based on the comment of the previous sentence.

Type 5. Initial sentence element, mood subject and topical subject are all separate.

The following cases occur in the text:

- Apart from a powerful capacity to draw attention to their /sic/ helplessness ... there is nothing the new born child can do ... (3)
- For this reason, biologists now suggest that language is ... (9)

This is the most complex of the types studied and makes possible a more varied interplay of discourse materials than the others. In the first case above ISE is topical, as is the main clause. The mood subject there is used to move the topical subject into the following subclause. The second case, discussed earlier, has ISE which consists of a discourse connective, a main clause serving as a modality marker, and a topical subject in the subclause.

On the basis of the very limited material discussed here we can make the following tentative observations about the relationship of the mood subject, the topical subject and the initial sentence element.

If we analyse topical structures in written discourse keeping the topical material apart from non-topical types of material, we find that the mood subject of the main clause may consist of any type of material. In other words, the mood subject may be the topical subject or it may consist of non-topical material of discourse organisation.

It may also be a syntactic dummy in a topical or non-topical clause. Where the mood subject of the main clause is not the topical subject, the latter in this text appears in a subclause, which may precede or follow the main clause. ISE may be topical or non-topical. The non-topical ISEs in the text are modality markers or discourse connectives. At least in the text studied, then, part of the development of the discourse topic takes place in terms of sequences of subjects, though these topical subjects often appear in subclauses, while the main clause has a non-topical function.

Though it is likely that with further analyses of different kinds of texts the picture obtained here will prove too simple, the findings seem to suggest that a framework of topical development based on the notions of initial sentence element, mood subject and topical subject as well as on the idea of different types of linguistic material in discourse, may be applied to examination of written discourse.

We shall next proceed to apply the notion of two types of topical progression, parallel and sequential, to an analysis of the text.

1.2. Topical progression in authentic discourse

Having established a kind of topical skeleton of the text in terms of the topical subjects of its individual sentences, we will now examine the way these topical subjects form different types of sequences. We shall apply the notion of parallel progression where the topical subjects of successive sentences have the same referent, and that of sequential progression where the rhematic part of one sentence gives rise to the topical subject in the following.

Below, the topical subjects in the text analysed are arranged in the order of their appearance in the sentences of the text. Again, the reader is advised to consult the complete text.

1. a human infant
2. new born children
3. a child
4. the new born child →
5. this helplessness →
6. young animals →
7. this long period of vulnerability
8. the human infant →
9. language
10. human beings

In this skeleton there are sequences representing the parallel type of progression such as sentences 1 - 4, and others representing the sequential type such as sentences 5, 6, and 9, which are indicated by placing the sequential topical subject to the right underneath the previous one. Some of the cases, however, are less clear-cut. Sentence 7, for instance, has a topical subject which may be claimed to refer back to the ideas developed all through the paragraph. Sentence 10, on the other hand, continues the initial subtopic, which is readopted in 8 and later in the comment of 9.

2. COMPARISON OF TOPICAL DEVELOPMENT IN AUTHENTIC AND SIMPLIFIED DISCOURSE

The second part of this paper consists of a description of topical development in simplified discourse, and comparison between simplified and authentic text in this respect. In order to find out whether simplification is accompanied by changes in the pattern of topical development, several experienced language teachers and applied linguists were asked to produce simplified versions of the text analysed here. They were given no instructions as regards the kinds of changes they were expected to make, only the aim was specified: to make the text more readable for foreign language learners on the tertiary level of education.⁷ It was expected that the simplifiers would then produce versions intuitively based on their knowledge of foreign learners' difficulties.

Of the versions produced, four were rewritten as discourse with resulting changes in topical development, while in the rest only occasional vocabulary items and syntactic structures had been changed. The first four will be analysed here.

2.1. Comparison of topical structures

The simplified texts (see Appendix) vary to some extent in their reproduction of the original pattern of topical structures, as seen in Table 1. (The abbreviation OT refers to the original text, and ST1---ST4 to the four simplified versions of this text.)

Table 1. Distribution of different types of topical structures in OT and STs

Type	Percentage of types		Number of cases					total in all STs
	OT	STs (av.)	OT	ST1	ST2	ST3	ST4	
1	10	41	1	12	3	2	5	22
2	20	19	2	1	3	2	4	10
3a	10	0.7	1	1	1	1	1	4
3b	20	21	2	5	3	2	1	11
4	20	0.6	2	-	1	2	-	3
5	20	0.6	2	1	-	1	1	3

Type 1. ISE = topical subject = mood subject

Type 2. ISE ≠ topical subject = mood subject

Type 3. ISE = mood subject ≠ topical subject

Type 4. ISE = topical subject ≠ mood subject

Type 5. ISE ≠ topical subject ≠ mood subject

Some general trends may be observed. Compared with the percentage of types in OT, the average percentages of types in STs imply avoidance of types 3a., 4 and 5. Type 2 has more or less retained its relative frequency, as has 3b., where the main clause is a modality marker. Type 1, however, has been used proportionately much more in STs than in OT, particularly in ST1 and ST4. All in all, the simplifiers can be said to have favoured types where the topical subject is the mood subject of the main clause,

or, where this is not the case, structures where the initial main clause serves as a modality marker, and the topical subject follows in a subclause. Sentences with a dummy subject in the main clause, with a topical subclause in the initial position, or with ISE, mood subject and topical subject separate, have been used less frequently than in OT. Strangely enough, there is also indication that the proportion of the less used types 3a, 4 and 5 is about the same within an individual text.

The greatly varying individual strategies used by the simplifiers are reflected in the proportion of the types of structures, particularly in ST1 and ST3. Of these two, the first has a high percentage of Type 1 ("John is running"). At the same time it doubles the original number of sentences. ST3, on the other hand, follows OT most faithfully both in the number of sentences and in the proportion of the various types of structures. It uses other means of simplification, some of which will be discussed below.

It would seem then that some types of topical progression are intuitively felt to be less readable than others. The principle behind the use of the various types in simplified texts might be that of identification of the topical subject. The types where it is separate from the mood subject and ISE and which could thus be assumed to necessitate a separate identification process by the reader, are much less frequent than those where it occurs in the syntactically prominent position of the mood subject of the main clause. The one exception to this is type 3a., where the topical subject is separate from the mood subject: here the main clause represents non-topical material and the topical subject appears in a subclause following the main clause. This may indicate that the use in the main clause of some kinds of non-topical material is felt to increase readability in spite of the fact that the sentence structure becomes more complex. - Of course, as was noted above, these observations are based on very limited material, and may have to be modified in the light of further analyses.

2.2. New variants of topical structure in simplified texts

The simplified texts contain some variant types of the topical structures discussed above. Thus, in addition to subtypes 3a and 3b there appear the following cases of type 3:

- The only thing they can do to persuade someone to look after them is to cry ... (ST1/3)
- All he can do is to cry ... (ST2/4)

In these cases the main clause belongs to topical material, but an emphatic use of extrapolation moves the topical mood subject into the subclause. - In the STs there are also two cases where the main clause is metalinguistic:

- The use of this term means that learning to speak a language is ... (ST2/9)
- By this they mean that the human infant is ... (ST4/11)

2.3. Comparison of patterns of topical progression

In the discussion above, two possible types of topical progression were mentioned, the parallel type, where a sequence of sentences shares the topical subject, and the sequential type, where the topical subject of one sentence is based on some part of the comment of the previous one. In topical development, the topical subjects may be considered to develop one subtopic at a time, while these subtopics in turn contribute to the development of higher subtopics or of the discourse topic. We shall compare the use of the two types of topical progression in STs to their use in OT, briefly described above, on p. 83.

By applying these notions to the topical progression in OT we get the following diagram:

Table 2. Topical progression in OT

Sentence No.	topical depth				Subtopic No.
	1	2	3	4	
1	human infant				1
2	children				1
3	child				1
4	child	→			1
5		this helplessness	→		2
6			animals	→	3
7				this period of ...	4
8	it	→			1
9		learning language			5
10	human beings (S)				1

Analysed in this way, the passage consists of five sub-topics, of which child could be considered the primary subtopic both in terms of its frequency and in terms of its initial occurrence. The notions of parallel and sequential progression, however, require some modification in the light of this analysis. Parallel progression seems either to proceed directly, as in 1-4, or to extend over a piece of text based on sequential progression, as from 4-8. Thus, in 8, the primary subtopic is reassumed without being re-introduced by sequential progression, a type we shall call extended parallel progression. On the other hand, in 10 the primary subtopic is reassumed after a lapse of one sentence but supported by reference in the comment of 9 to human child. This kind of parallel progression is marked with (S) in the diagrams.

The diagram also shows the numbers of successive sequential types of progression, here called the topical depth. In this text, introduction of successive new sub-topics by sequential progression creates a topical depth of 4 in 4-7.

The ratio of subtopics to the number of sentences, the proportion of the types of progression, and the depth of topical progression may be factors that contribute to the perception of a text as simple or complex. We shall compare these features in OT to the corresponding features in STs to see whether they have been affected by intuitive simplification (Table 3, pp. 88 and 89).

Table 3. Topical progression in STs¹
(topical subjects may appear in abbreviated form)

ST1		No. of subtopic
1	babies →	1
2	↓ characteristic	2
3	they	1
4	baby →	1
5	↓ another human being →	3
6	↓ another than mother	4
7	babies →	1
8	↓ animals	5
9	↓ they	5
10	↓ animals	5
11	child →	1
12	↓ this period	6
13	↓ second characteristic	2
14	↓ this characteristic →	2
15	↓ learning language →	7
16	↓ human brain	8
17	↓ human eyes	9
18	↓ human skeletons	10
19	↓ ability to learn language	7
20	human species (S)	1

No. of different subtopics: 10

ST2		No. of subtopic
1	babies	1
2	baby	1
3	baby	1
4	he →	1
5	↓ animals ²	2
6	↓ they →	2
7	↓ man's survival	3
8	babies →	1
9	↓ this capacity	4
10	babies (S) →	1
11	↓ learning to speak	4

No. of different subtopics: 4

¹ Extended progression is indicated in Tables 2 and 4 by straight vertical arrows which connect two topical subjects.

² For a discussion of this case, where topical progression is based on contrast, see p. 95 below.

Table 3. (cont.)

ST3		No. of subtopic
1	baby	1
2	it	1
3	it	1
4	baby	1
5	↓ helplessness	2
6	↓ animals	3
7	humans (S)	1
8	baby	1
9	humans	1
10	babies	1

No. of different subtopics: 3

ST4		No. of subtopic
1	infants	1
2	infants	1
3	they	1
4	they	1
5	they	1
6	infants	1
7	↓ period of nurturing	2
8	↓ second respect	3
9	↓ capacity to learn language	4
10	↓ language	4
11	human infant	1
12	learning language	4

No. of different subtopics: 4

Comparing the diagrams of STs with that of OT shows, first, that the primary subtopic child has been retained in all STs, though in different lexical forms. However, the treatment of the original subtopics varies. Animals appears as a subtopic in ST1, ST2 and ST3, but not in ST4, while helplessness has been omitted in ST2 and replaced by nurturing in ST4. Learning language has been omitted in ST3. On the other hand, some new subtopics appear. In ST2 there is one new subtopic, man's survival, while ST1 has several: another human being, another than mother, human brain, human eyes, human skeletons, human species,

characteristics, second characteristic, this characteristic, and ST4 has second respect.

To summarise, apart from ST1, the simplified texts have fewer subtopics than OT (OT 5, ST2 4, ST3 3, ST4 4), even though both ST2 and ST4 have increased the total number of sentences in the text from 10 to 11 and 12. ST1, however, presents another kind of picture. It has ten subtopics, but it also doubles the total number of sentences, thus retaining the proportion of different subtopics to number of sentences. We may conclude that the reduction of the number of subtopics forms one strategy of simplification. It leads to a proportionate increase in sentences with the primary subtopic as the topical subject, and a decrease in sentences with a tertiary or secondary subtopic as the topical subject. - Further, ST4 also has one case with extended sequential progression, a type that did not appear in OT. This case will be discussed below on p. 95.

Increasing the number of subtopics in ST1 also leads to an increased number of cases representing extended parallel progression, i.e., cases where the topical subject of a sentence is readopted after a number of intervening sentences. In OT, the number of these cases is two, one with extension over one sentence, and another over three sentences, both at the topical depth of 1. This may now be compared with the corresponding figure in STs (Table 4).

Table 4. Number of cases of extended progression in OT and STs

Topical depth	OT	ST1	ST2	ST3	ST4
1	1x1 ¹	1x1	1x1	1x2	1x4
	1x3	1x2	1x3		
		1x3			
		1x8 (S) ²			
2		1x11			
3		1x3			

¹ Read: one case extending over one sentence, etc.

² For a discussion of this case of extended sequential progression see below p. 95.

We see from Table 4 that while OT has extended parallel progression only at the level of the primary subtopic, ST1 has cases of a secondary and tertiary subtopic with parallel progression. All other cases in STs occur at the level of the primary subtopic. The number of the cases in ST2 is the same as in OT, while ST3 and ST4 have only one case of this type. - Again, the simplification strategy of ST1 has lead to a more complex pattern of progression than in OT. There is a similar difference between ST1 and the other STs in the use of the different topical depths, created by successive cases of sequential progression. This is shown in Table 5.

Table 5. Use of topical depth in OT and STs, and the number of topical subjects occurring at the depth concerned

Depth ¹	OT	ST1	ST2	ST3	ST4
1	6	6	6	8	7
2	2	8	4	1	3
3	1	3	1	1	2
4	1	3	-	-	-

¹ Topical depth is created by the number of successive cases of sequential progression based on the primary subtopic

As the table shows, all texts except ST1 have few cases with more than two topical levels. The reason for the more complicated pattern of topical progression in ST1 may at least partly be due to its high frequency of topical structures of Type 1, i.e., a type where the combined mood and topical subject occurs initially in the sentence. Since the sentences are short, this makes it necessary to develop subsidiary ideas in separate sentences and thus to create additional subtopics by means of sequential progression. Table 5 also shows that parallel progression is used far more than sequential progression in all texts, and that two or more consecutive sentences with sequential progression are rare.

We could now summarise the findings concerning topical progression in simplified texts. Apart from ST1, with its highly individual strategy of simplification, the following changes occur consistently in simplified texts: slight decrease in the number of subtopics per sentence, slight increase in the use of parallel progression, and a consequent increase in cases using topical depth of 1, i.e., cases with the primary topical subject. Cases of extended parallel progression show little change.

All the types of parallel and sequential progression observed in STs are not, however, completely representative. There are cases which indicate that analysis based on this binary division is inadequate. We shall now look at these cases.

2.4. Remarks on parallel and sequential types of progression

We shall next discuss some cases which seem atypical of the basic types of progression. First, in some instances the topical development takes place more gradually than in the "pure" parallel or sequential development. The following case will illustrate this:

- Without care from some other human being or beings, be it mother, grandmother, sister, nurse, or a human group, a child is very unlikely to survive. This helplessness of human infants is ... OT/4-5

Here the topical subject of the last sentence may be retraced to the comment in the previous one, ... is very unlikely to survive. However, it has been prepared, as it were, by the treatment of the idea in all the three sentences before it. Whether this can be considered a simple case of sequential progression is something that can perhaps best be discussed in the context of a larger sample of cases, and will not therefore be taken up here. In Tables 2 - 4, there are also cases of parallel progression of this type, which have been marked with (S) to indicate that even sequential development

is involved. Out of the three cases attested the following will elucidate this:

- Biologists use the term "species specific" to describe how all undamaged human babies are genetically predisposed ... to the learning of a language. ST 2/10

The topical subject of the sentence, human babies, may be linked with the primary subtopic of the text, represented by the topical subject of most preceding sentences, and reassumed here by way of extended parallel progression. But it is also linked with the baby in the comment of the previous sentence. Similar cases occur in ST1 and ST3. Further, there is one case where the gradual development of the topical subject based on parallel progression ties up with the initial sentence element of the previous sentence:

- Because all undamaged human infants learn language, and no other creatures do, biologists say that language is 'species specific'. By this they mean that the human infant is genetically programmed ... ST4/10-11

Again, human infant is reassumed on the basis of appearing as the primary topical subject in most preceding sentences (see Table 3), but it also ties up with all undamaged human infants in the initial subclause of the previous sentence.

- Cases like this are here classified as instances of parallel progression, but analysis of further texts is needed to specify their character more closely.

A similar ambiguous case occurs in ST1:

- Just as these are specifically human characteristics, so, the scientists suggest, the ability to learn language is a specially human characteristic. The human species is able to survive because all normal human beings are able to learn and to use language. ST1/19-20

The primary subtopic in the text is the baby (see Table 3), but here, in the last sentence of the text, the human species appears. Is this to be interpreted as a case of

extended parallel progression with a more inclusive concept replacing the original subtopic, or should we see the human species as a case of sequential progression based on the previous sentence? It has here considered to represent extended parallel progression with sequential ties, like the following:

- ... when a baby is totally dependent ... it shows ... the ability to learn a language. Biologists now suggest that normal humans automatically learn a language. Babies learn language ... ST3/8-10

Since both cases occur at the end of the text, the use of the more general concepts representing the primary subtopic may be caused by the conclusive character of the final sentence.

Extended parallel progression may also contain atypical features. First, while it occurs in OT only with the primary subtopic, there are cases in some STs with a secondary and tertiary subtopic (see Table 3). The following example, with a tertiary subtopic extending over a sequence of three sentences, comes from ST1:

- Biologists suggest that learning language ... is an ability which is only found in the human species ... the human brain ... human eyes ... human skeleton ... the ability to learn language (ST1/15-19)

There are also two cases of extended parallel and sequential progression which contain discourse organisation material (first ... second) to facilitate perception of textual cohesion:

- The first characteristic which all human babies share is that they are completely helpless. ... The second characteristic which human babies share, develops during the long period of learning to survive. ST1/2 and 13
- All human infants ... are alike in two respects. Firstly ... The second respect in which all human infants are alike is ... ST4 1-2,8

In the first case, while the first topical subject is based

on sequential progression, the second follows from it by parallel progression. In the second case, however, two respects in the first sentence is referred to by a discourse connective, firstly, in sentence 2, and, six sentences later, by the second respect, a topical subject based on sequential progression. It would seem, then that the "topicality" value of the topical subject may vary, but further analyses are necessary.

The various ways in which a topical subject in sequential progression may be connected with the previous comment, may be illustrated by the following cases:

- The other human being need not necessarily be the mother. A grandmother, sister, or someone who is not related to the child, may care for it. ST1/5-6
- /young animals/ ... very quickly develop the capacity to fend for themselves. It would seem that this long period of vulnerability ... OT/6-7

In the first example above, the topical subject of the second sentence develops the comment of the previous one by listing cases of "non-mothers". In the second case, the topical subject of the last sentence arises out of a contrast with the idea in the previous comment: learn very quickly to fend themselves vs. long period of vulnerability. Vulnerability is also cohesively linked with the notion of helplessness, which occurs several times in the preceding sentence.

In addition to the above case where sequential progression is based on the idea of contrast, there appears a similar case with parallel progression:

- A new-born baby is unable to survive without help. All he can do is to cry ... New-born animals, on the other hand ... ST2/3-4

The topical subject, new-born animals, in the last sentence is introduced by contrast to the previous topical subject, new-born baby, as on the other hand makes explicit. Whether this type of progression always necessitates the use of a discourse adjunct, and whether it may be based on relationships other than contrast, will have to be discussed in a context of more extensive material.

The occurrence of these varieties of topical progression is an indication of the intricate manner in which the topic and its subtopics are developed in discourse, and of the problems related to its analysis in terms of the binary division into sequential and parallel progression. Further investigation seems to be needed at least of the extended types of progression, of the use of non-topical material as or with the topical subject, and of parallel progression based not on repetition of the subtopic but on other relationships with it, such as contrast or conceptual inclusion. Similarly, the possibility of several candidates for topical subject in one sentence, which has not been discussed in this paper, should be examined.

3. DISCUSSION

The above findings can be interpreted as indicating that in addition to the generally recognised features affecting readability such as sentence length, syntactic complexity and type of vocabulary, some types of topical development in discourse are intuitively felt to affect readability of a text. In the light of the findings of this paper, a "simple" text would represent the following picture of topical development: it would mostly use sentences where the topical subject is the mood subject of the main clause; or, when the main clause serves as a modality marker or, has, say, a metalinguistic function, the topical subject would be the mood subject of a subclause immediately following the main clause. The number of sentences with a non-topical initial sentence element would be relatively small. Secondly, sentences would follow each other by means of parallel progression much more frequently than by sequential progression, with few cases of extended progression or with other features atypical of the "pure" types. Extended progression might be supported by the use of cohesive discourse adjuncts.

The simplification of a text is a process which affects a number of interrelated textual features. In the material examined here two distinct types of simplification strategy appear, one resulting in the kind of "simple" text described above, and the other resulting in an extreme simplification of topical structures, with a proportionate increase in the type John is running. At the same time the original pattern of topical progression is greatly complicated. This text shows a definite increase of extended parallel progression, not only at the level of the primary subtopic, but also on that of secondary and tertiary subtopics. Further, it increases the number of original subtopics and thus the proportion of sequential progression, which means an increased use of the different topical depths.

Further, different simplification strategies also affect features of discourse which have not been analysed in this paper. Tentative examination of cohesion in the different texts shows that some patterns of cohesion are affected (Lautamatti 1978), as are common readability index features such as sentence length, sentence complexity and type of vocabulary.

As was mentioned above, the evaluation of the effect on readability of the changes studied is outside the scope of this paper. However, some observations on problems relating to such evaluation are called for. First, if we wish to examine the changes brought about by simplification of topical development alone, we will have to eliminate changes occurring in vocabulary, sentence length and sentence complexity. In the light of the present material this seems impossible because of the interrelatedness of these features. On the other hand, we might compare texts based on different simplification strategies, such as ST1 and ST3 in this experiment. This, however, gives no indication of how much the effect is due to changes in individual features. It is possible that the resulting simplification is due largely to changes in vocabulary alone.

This brings us to a more basic question: the aim of simplification in the teaching of a foreign language. Ideally, simplified texts are used in the teaching of FL reading comprehension as a ladder towards less simplified and finally authentic texts. Therefore, our aim in producing simplified reading material is not to make texts as simple and readable as possible but to reduce their difficulty to a level which the students finds motivating and instructive, and yet keep their informational and conceptual level intact. Rather than find ways of producing as simple discourse as possible we can use simplification to find discourse variables that can be used in language teaching. One such variable may be topical development in discourse. For this reason, the findings discussed here might be of interest for language teachers and material producers.

Not all problems in reading comprehension are related to unfamiliar vocabulary or syntactic forms. Students may also need help in following the line of argument and in relating different parts of discourse to each other. Students who have problems on discourse level rather than word or sentence level might benefit from exercises which help them to perceive how the topic is developed in discourse and to learn to take advantage of predictability relating to topical development.

Similarly, differentiation between the types of discourse material, and familiarity with their functions, might help a foreign language learner to relate more explicitly the topical and non-topical discourse material, and in this way to use the non-topical material as the kind of supporting framework that it is meant to be, not as one more linguistic obstacle. To practise above-sentence-level predictability in FL reading comprehension, a modified cloze could be applied to various aspects of topical development. This would direct the learner's attention to discourse level and might help the teacher in locating problem areas in the handling of texts. - Further, contrastive analysis of patterns of topical development in the source language and

the target language could be used to predict areas where the student is likely to base his strategies for handling written discourse on misleading predictions.

FOOTNOTES

- 1 Enkvist (1975: 74) calls these teeman toisto ("repetition of theme") and teemaprogressio ("progression of theme"), but for reasons that will become obvious below, we shall be concerned with the repetition or non-repetition of what is here called the topical subject. As Enkvist points out, analysis of these two types is made difficult by the great number of cohesive references that often exist between sentences in a text. - Some attempts to extend analysis into atypical cases will be made below, pp. 92-96. - See also Eugen Holman's analysis of the two types in spoken Finnish as represented in contemporary fiction (Holman 1976).
- 2 This term is used here in the same sense as in Huddleston 1971: 61-62. Huddleston further distinguishes the mood subject from the prepassive subject and the concord subject. He gives the following example where the there is the mood-subject, and some 500 people the concord subject, while the pre-passive subject has not been expressed: There have already been killed some 500 people.
- 3 The topical subjects in the sentences analysed are underlined. If there is an anaphoric reference between the clauses of the sentence, both the lexical item and the pronoun are underlined.
- 4 Huddleston, following Halliday, calls these thematic adjuncts 'discourse sentence adverbs'.

- 5 Huddleston uses the term 'lexical' adjunct (Huddleston 1971: 321).
- 6 Where the main clause and the subsidiary clause both have a mood subject that can be said to be topical, the mood subject of the main clause has here been considered the primary topical subject. In the text analysed, there is one case of this type (sentence 7), while in some others (sentences 1, 6, 8, 10) there is a cohesive tie in the form of anaphoric reference between the subjects of the main clause and the subclause.
- 7 The simplifiers were given the following instruction: Simplify the following text preserving its character as a piece of discourse, to make it more readable for foreign language students on the tertiary level of education.

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Appendix:
Simplified Texts

SIMPLIFIED TEXT 1

(1) All healthy, new-born babies, in all countries of the world, share two characteristics.

(2) The first characteristic which all human babies share, is that they are completely helpless. (3) The only thing they can do to persuade someone to look after them is to cry, and in this way they can draw attention to themselves. (4) A helpless baby will only survive if another human-being looks after it. (5) The other human-being need not necessarily be the mother. (6) A grandmother, sister, or someone who is not related to the child, may care for it.

(7) Human babies are unusual in this characteristic, if we compare humans to other animal species.

(8) Many new-born animals can stand on their feet very soon after being born. (9) Often they can run with the herd a few hours later. (10) Young animals may get hurt and even die during their first year, but those that survive are able to look after themselves. (11) A young human child takes much longer to learn to look after itself. (12) We must suppose that this long period of learning is necessary to allow the human race to survive as a species.

(13) The second characteristic which human babies share, develops during the long period of learning to survive.

(14) This characteristic is the ability to learn language and it is shared by all babies who have normal, healthy brains. (15) Biologists suggest that learning language, during this time, while the young child cannot look after itself, is an ability which is only found in the human species. (16) They suggest that the human brain is specially designed to allow human beings to learn language. (17) We know already that human eyes are designed to see the world in colour and to recognise whether objects are solid or not.

(18) We also know that human skeletons are designed to allow people to walk upright on two feet, and not use their hands as well. (19) Just as these are specially human characteristics, so, the scientists suggest, the ability to learn language is a specially human characteristic. (20) The human species is able to survive because all normal human beings are able to learn and to use language.

SIMPLIFIED TEXT 2

(1) At birth, all babies have two things in common with each other, wherever and whenever they are born. (2) (This is not true if the baby is in any way damaged.) (3) First, a new-born baby is unable to survive without help. (4) All he can do is to cry, which may attract the attention of those who can help him to survive -- his mother, grandmother, sister, nurse and so forth. (5) New-born animals, on the other hand, can stand on their feet very soon after birth and run with their herd a few hours later. (6) Although animals remain vulnerable to attack for weeks, in some cases for months, after birth, they become able to survive without help very much more quickly than human babies. (7) Man's survival as a species depends on this particularly long period of infant vulnerability. (8) Secondly, all babies possess a capacity to learn language. (9) This capacity is revealed while the baby is still dependent on others for survival. (10) Biologists use the term "species specific" to describe how all undamaged human babies are genetically predisposed, or programmed, to the learning of a language. (11) The use of this term means that learning to speak a language is part of the normal and natural development of an undamaged human being, in the same way that it is normal to see in three dimensions and in colour, (and) in the same way that it is normal for a man to stand upright.

SIMPLIFIED TEXT 3

(1) When a baby is born (into any community anywhere) it has two things which it shares with all babies, providing none of them have suffered any damage. (2) First, it will be helpless. (3) And, apart from crying to attract attention, there is nothing it can do to change this helplessness. (4) Without help from other human beings the baby is unlikely to live.

(5) A baby's helplessness contrasts with the ability many young animals have -- the ability to stand up a few minutes after birth and to run a few hours later. (6) Although these young animals are in danger for some time after their birth they can help themselves much better than human babies. (7) It seems that humans have to pay for their long period of development with a long period of helplessness.

(8) It is during this period (when the baby is totally dependent) that it shows the second thing it shares with all babies -- the ability to learn a language. (9) Biologists now suggest that normal humans automatically learn a language. (10) Babies learn language because they are designed to learn one as part of their normal development, just as they are designed to see in three dimensions and in colour, and to stand upright.

SIMPLIFIED TEXT 4

(1) All human infants, wherever they are born, are alike in two respects, so long as they are not damaged in some way before or after birth. (2) Firstly, and most obviously, new-born infants are completely helpless. (3) They are able to draw attention to themselves by crying, but, apart from this, can do nothing to ensure their own survival. (4) They depend entirely upon other human beings, such as mother, grandmother, sister, nurse and so on.

(5) Without the care of these they are unlikely to survive. (6) In this respect, human infants are unlike many new born animals, which sometimes need to get to their feet and run with the herd within minutes of birth. (7) For humans, the long period of nurturing which fits man for survival as a species means that there is an equally long period of dependence and therefore vulnerability.

(8) The second respect in which all human infants are alike is the capacity to learn language. (9) It is during the period of vulnerability that this capacity is exercised. (10) Because all undamaged human infants learn language, and no other creatures do, biologists say that language is 'species specific'. (11) By this they mean that the human infant is genetically programmed so that it can acquire language. (12) The learning of language is as much part of the normal development of human infants as, for instance, the ability to see three-dimensionally and in colour, or the characteristic of standing upright rather than going on all-fours.