Readers' ability to identify and accept relational propositions (RPs) in a text may influence their judgments of text coherence. Types of text comprehension were defined in two ways: (1) according to whether an RP was immediately identifiable, identifiable after further reading, or not identifiable; and (2) according to whether the proposition was judged to be acceptable. Using a sample text (an editorial) RPs were identified, articulated into statements, and inserted into the text. This showed that the sample text would probably manifest a high degree of coherence to its readers in that its dominant rhetorical relations would be relatively identifiable, with their acceptability depending on the readers' beliefs and values. Dominant rhetorical relations in the sample text were unsignalled, left for readers to infer. It is suggested that by virtue of their schematic knowledge of editorials, readers have fairly specific expectations about dominant rhetorical relations. (JP)
Articulation of relational propositions: A tool for identifying an aspect of text comprehension

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Abstract

This paper suggests a method for clarifying an aspect of text comprehension. First, the rhetorical relations of the text are identified; second, the relational propositions are articulated into explicit statements which are inserted into the text and third, the identifiability and acceptability of the propositions is evaluated. Finally, an attempt is made to explain the readers' relational inferences in terms of expectations evoked by text type.

1. Introduction

Published texts are usually felt to be coherent in the sense of being interpretable, which is the way coherence is understood, e.g. by Enkvist (1981). According to this conception of coherence, a text is coherent if its readers can attribute meaningful interpretations to it, i.e. if they can think of contexts in which the text makes sense. My concern in this paper is not this kind of global coherence but, instead, coherence at a more local level: I will be concerned with the interpretability of the rhetorical relations of texts. I will assume here that the readers' interpretations also extend to rhetorical relations in the sense in which these have been defined by Grimes (1975), Mann, Thompson and Matthiessen in several articles, and others, including the present writer (see Tirkkonen-Condit, 1985). The discussion in this paper will be based on Mann and Thompson's (1988) account of rhetorical relations.

In rhetorical structure theory, texts are seen as hierarchical constellations in which parts of texts are functionally related in ways which can be relatively accurately described. These relations are called rhetorical relations, and they give rise to so-called relational propositions in the process of interpreting the text.

As was pointed out above, the readers' interpretations of a text are assumed also to include an account of its relational propositions, i.e. of "the unstated but inferred propositions that arise from the text structure in the process of interpreting texts" (Mann and Thompson, 1988: 244). In some sense the propositions are in the text, but they are seldom articulated into statements. If the text is felt to be coherent, however, the relational propositions are in principle articulable. The parts of text that can have articulable mutual relations can be of any size, and the relations need not be between adjacent parts of the text.

The rhetorical relations are either nucleus-satellite relations or nucleus-nucleus relations. In a nucleus-satellite relation, the part of the text which constitutes the
The nucleus is more central to the writer's goal than the satellite part. The satellite has an ancillary role, which can be seen, for instance, in that the satellite can be deleted without making the text incomprehensible.

2. The purpose of the paper

The first purpose of this paper is to show that relational propositions can in principle be articulated into "statements". For this purpose, the dominant rhetorical relations in an editorial will be articulated and inserted into the text.

The second purpose is to show that the articulation exercise helps to distinguish two elements of comprehension: identifiability and acceptability. Relational propositions are either identifiable or unidentifiable. The identified relational propositions, when they are articulated into statements, can be accepted or rejected by readers. We may see, for instance, that the writer has probably intended a particular item in the text as evidence for the validity of a claim but we may disagree about the adequacy or even the relevance of the evidence (see Johnson, 1987). This type of inadequacy relates to a discrepancy in the writer's and reader's beliefs or values rather than to interpretability. A possible name for this aspect of text comprehension is acceptability. Thus I will be concerned with identifiability on the one hand and acceptability on the other.

The third purpose of the paper is to try to answer the question of how readers can identify rhetorical relations, though these are virtually unsignalled. In answer to this question I will consider the hypothesis that it may be the readers' fairly specific expectations of text type that help them to infer the dominant relations.

3. Description of rhetorical relations and articulation of relational propositions

3.1. Rhetorical relations in the sample text

The sample text whose relational propositions will be articulated and evaluated is an editorial published in the New York Times on Friday, December 30, 1988. The text in its entirety reads as follows. (Sentence numbers have been added for ease of reference.)

**Ageless, and Dressed Like an Athlete**

(1) One day this week an elderly New Yorker was seen running for a bus. (2) Running like a deer! (3) How come this woman was so fleet of foot? (4) Because said feet were encased in Nikes, or Adidas, or Reeboks. (5) Or something just like
them. (6) Along with millions of other Americans old enough to remember Jesse Owens, she has discovered that wisdom lies in dressing like an athlete.

(7) There is an 84-year-old New Englander, for instance, whose collection of sweats rivals that of the heavyweight champion Mike Tyson. (8) She has them in pink and blue and red and gray, and she has them for all occasions.

(9) On three-dog nights, when once she might have huddled in bed dressed in a flannel nightgown, banked by the requisite trio of spaniels, she is serene in sweatshirt and pants. (10) And the ice-cube feet that used to make it through the night attired in hand-knitted booties are now toasted by sweat socks - the kind with two stripes at the top.

(11) There is nothing new, of course, in dressing practically. (12) But to dress as if you were in training is to do so without sacrificing chic and secrecy. (13) Nurse shoes, wedgies and the little numbers with the tractor-tread sole are classic solaces for the footsore. (14) But they proclaim the bunion, the callus and the cruel corn.

(15) Put on running shoes, however, and who's to know if you're going to walk to work or simply have bum feet? (16) As for sweatsuits, they do what shawls, snuggies and long johns never could: provide warmth at the same time that they project action, energy and the possibility of a five-mile jog.

(17) From toddlers to totterers, millions of Americans now know happier feet and cozier days and nights because they're dressing like competitors for the Golden Gloves. (18) May this fashion never go out of style.

It is not necessary for my purposes to describe the whole text as a network of rhetorical relations, and therefore only a few dominant relations will be pointed out. It will be assumed, throughout this analysis, that different readers may come up with slightly different interpretations and that comprehension is never independent of readers. The analyses offered will represent plausible interpretations and, as such, they will serve the purposes of illustration.

The point of the sample editorial is to argue for the "athlete" style of dressing, which is claimed to be practical and elegant for all ages². This claim or thesis is first expressed as a general statement in sentences (11-12) as follows: There is nothing new, of course, in dressing practically. But to dress as if you were in training is to do so without sacrificing chic and secrecy. The opinion also transpires from the final paragraph, and from the initial paragraphs which describe individuals who dress in the athletic style, and ultimately, from the heading.

The first three paragraphs, i.e. sentences (1-10), constitute BACKGROUND to the writer's thesis, which is expressed in (11-12). Mann and Thompson (1988: 273) define BACKGROUND as a satellite which increases the reader's ability to comprehend an element in the nucleus: in this instance the BACKGROUND comprises two accounts of old ladies whose feet are comfortable in Nikes or Adidas and whose bodies keep warm but look elegant day and night in sporty indoor and outdoor wear. The BACKGROUND in the beginning of the text puts the writer's thesis in a proper framework, and enables the reader to comprehend it sufficiently.

A closer analysis of (11-12) shows that sentence (11) functions as a CONCESSION satellite to (12). According to Mann and Thompson's (1988: 254-255) definition of
CONCESSION, the writer has a positive regard for the situation presented in the nucleus; while the writer acknowledges a potential or apparent incompatibility between the situations presented in nucleus and satellite, s/he regards the situations as compatible and recognizes that the compatibility between the nucleus and the satellite increases the reader's positive regard for the nucleus.

In this instance the writer seems to anticipate that the readers will be wondering, after having read sentences (1-10), "What is new in dressing practically?" By admitting, by means of the CONCESSION, that there is nothing new, the writer aims at increasing the reader's positive regard for the thesis (the nucleus), namely that the athlete style of dressing does not only provide practicality but also "chic and secrecy." It is to be noted that the interpretation of the relation as a CONCESSION is supported by the modal adverbial of course. The other relations pointed out in the present analysis are not signalled in a comparable way.

The text that follows, i.e. (13-18), constitutes a satellite, namely EVIDENCE for the nuclear thesis of (11-12). According to Mann and Thompson's (1988: 251) definition, EVIDENCE increases the reader's belief in the nucleus; there is the constraint that the reader must believe what is presented in EVIDENCE or at least find it credible. In this instance the EVIDENCE consists of details of what is meant by "chic and secrecy" and how exactly these are attained by "dressing as if you were in training."

Sentence (17) constitutes a SUMMARY of (13-16); in Mann and Thompson's (1988: 277) definition, SUMMARY is a satellite which presents a restatement of the content of the nucleus and is shorter in bulk than the nucleus. This definition seems to fit: the main idea of (13-16) might well be restated in the words of this sentence, in which "happier feet and cozier days and nights", for instance, stands for the various comforts advocated in (13-16).

The last relation to be pointed out is a JUSTIFY relation, with (18) as a nucleus and (17) as a satellite. The effect of JUSTIFY, in Mann and Thompson's (1988: 253) words, is that "the reader's comprehension of the satellite increases his readiness to accept the writer's right to present the nucleus." In the last sentence, i.e. the nucleus, the writer expresses a wish that the athlete fashion of dressing might never go out of style; in an editorial the wish would sound hollow if it were not argued for. The preceding summary in (17) can be seen as this argumentation.

The text could of course be submitted to a more detailed rhetorical structure analysis, but for the purposes of this article the five rhetorical relations pointed out above will be sufficient. They are presented schematically in Figure 1 below, in which the numbers refer to sentence numbers in the text. The nucleus-satellite relations are marked with arrows such that the arrowhead points to the nucleus.
3.2. Articulation of relational propositions in the sample text

In what follows, an attempt will be made to verbalise, i.e. to articulate into statements, the relational propositions which emerge in the process of interpreting the text. The 'statements' which stand for the relational propositions will be shown in bold type. The first rhetorical relation, i.e. BACKGROUND, could be articulated into the following statement: What I will say at the beginning of the text will increase your comprehension of what I will say somewhat later. This statement is to be placed right at the beginning of the text. The statement is inaccurate as it does not specify the scope of the subsequent satellite. Moreover, if we assume that the articulation of relational propositions represents the reader's interpretation process and tries to capture the events of the first reading, this formulation is too ambitious. When the reader has not even started reading, s/he cannot make accurate inferences about the relational propositions that might emerge; therefore the articulation which I have suggested must be treated as a potential inference that the reader may or may not make while reading the BACKGROUND passage.
The above treatment may ultimately have some psychological validity, since readers of editorials can be assumed to have rather specific expectations about text type. The mere knowledge that the text is an editorial evokes an argumentative scheme in the reader's long-term memory (see James, 1989), which guides his expectations and thus the top-down processing of the text. In the instance of the present text, these expectations will predict, for instance, that the entire text simply cannot be a narrative, as its very first paragraphs might suggest. The reader may therefore be able to infer, at a relatively early stage of reading, that the initial paragraphs are meant as background. I will discuss the origins of inferences about relational propositions in more detail in Section 5.

The CONCESSION relation between (11) and (12) in turn can be articulated as The above will increase your positive regard for what I will say next. This formulation presupposes that CONCESSION is articulated after the item itself.

The EVIDENCE relation between (11-12) and (13-16) can be articulated as Your belief of what I just said will increase when you read the following. The SUMMARY relation between (13-16) and (17) can be articulated as You will recognize what follows as a shorter restatement of what I said above. And finally, the JUSTIFY relation between (17) and (18) can be articulated as On account of what I said above your readiness to accept what I will say next will have increased. Alternative placements are possible, but a change in placement calls for a revision in the formulation. Each alternative placement will represent a slightly different interpretation process. Without an empirical study of these processes, however, there is not much point in speculating on the psychological plausibility of each placement.

It might be interesting to see, however, what the whole text looks like, when the articulated statements representing the relational propositions have been inserted. To illustrate this, the articulations of the five relational propositions discussed above have been inserted in the version of the text which follows. The inserted articulations are in brackets and printed in bold type, and the choice of their placement is mine.

Ageless, and Dressed Like an Athlete

(What I will say at the beginning of the text will increase your comprehension of what I will say somewhat later.)

(1) One day this week an elderly New Yorker was seen running for a bus. (2) Running like a deer! (3) How come this woman was so fleet of foot? (4) Because said feet were encased in Nikes, or Adidas, or Reeboks. (5) Or something like them. (6) Along with millions of other Americans old enough to remember Jesse Owens, she has discovered that wisdom lies in dressing like an athlete.
(7) There is an 84-year-old New Englander, for instance, whose collection of sweats rivals that of the heavyweight champion Mike Tyson. (8) She has them in pink and blue and red and gray, and she has them for all occasions.

(9) On three-dog nights, when once she might have huddled in bed dressed in a flannel nightgown, banked by the requisite trio of spaniels, she is serene in sweatshirt and pants. (10) And the ice-cube feet that used to make it through the night attired in hand-knitted booties are now toasted by sweat socks - the kind with two stripes at the top.

(11) There is nothing new, of course, in dressing practically. (The above will increase your positive regard for what I will say next.) (12) But to dress as if you were in training is to do so without sacrificing chic and secrecy. (Your belief of what I just said will increase when you read the following.) (13) Nurse shoes, wedgies and the little numbers with the tractor-tread sole are classic solaces for the footsore.

(14) But they proclaim the bunion, the callus and the cruel corn. (15) Put on your running shoes, however, and who's to know if you're going to walk to work or simply have bun feet? (16) As for sweatsuits, they do what shawls, snuggies and long johns never could: provide warmth at the same time that they project action, energy and the possibility of a five-mile jog.

(You will recognize what follows as a shorter restatement of what I said above.) (17) From toddlers to totterers, millions of Americans now know happier feet and cozier days and nights because they're dressing like competitors for the Golden Gloves. (On account of what I said above your readiness to accept what I will say next will have increased.) (18) May this fashion never go out of style.

In what follows I will first consider what possibilities there are, in principle, to use the articulation of relational propositions as a tool for explicating text comprehension. I will then illustrate the principle by evaluating the identifiability and acceptability of the relational propositions which were articulated in Section 3.2.

4. Judgement of identifiability and acceptability

The dimension of comprehension discussed in the present paper appears as a continuum between unidentifiability and acceptability. In principle, at least the following types of comprehension can be distinguished:

1. Unidentifiability. The reader cannot identify the relational proposition, which means that the text at that point does not make sense. The reader perceives that part of the text as incoherent.

2. Temporary unidentifiability. The reader identifies the relational proposition (probably) intended by the writer only after reading more of the text or perhaps the whole text. One reason for the delay may be a misleading or inadequate signalling of the relation. The reader's perception of incoherence is temporary.

3. Identifiability without acceptability. The reader infers the relational proposition but judges it as unacceptable. This judgement may be due to a variety of reasons, such as disagreement on what counts as facts or as cogent argumentation. Detection of fallacies in argumentation, for instance, will go under this heading.
4. Identifiability combined with acceptability. The reader identifies the relational proposition immediately, i.e. with no conscious perception of incoherence, and finds it acceptable.

This tentative categorization of types of comprehension will now be applied to some of the relational statements articulated in 3.2.

The BACKGROUND relation probably falls in the category of temporary unidentifiability, since it cannot be expected that a reader will identify the intended relation until after reading a considerable stretch of the text. When the reader starts reading the editorial, however, his prior knowledge of editorials tells him that the whole text cannot be a story or a collection of stories of old people dressing comfortably in an athletic style. largely by virtue of this knowledge, the reader will expect an expression of an argued opinion at some point of the text, and at the point where the opinion ultimately emerges, i.e. in (11-12) or perhaps at an earlier point, the reader probably identifies the relation as a BACKGROUND relation. The reader's acceptance of the articulated statement also seems likely, as the only claim made by the statement is that the reader's comprehension of subsequent text will be increased by reading what is offered as BACKGROUND.

The CONCESSION relation also seems easily identifiable. At the same time, the articulated statement is not necessarily automatically accepted, as it claims that admitting that there is nothing new in dressing practically will increase the reader's positive regard for the claim that the athlete style of dressing will also provide "chic and secrecy." The reader may be flattered, as intended, by the concession, but he may not be convinced. In this instance, the reader's perception is one of identifiability without acceptability.

The EVIDENCE relation is probably easy to identify, since the reader's expectations will probably predict that there will be such a relation at the point where the writer puts forward his thesis. It is not self-evident, however, that the reader will accept the evidence as valid. He may think that even if "dressing as if you were in training" may not proclaim the callus or the cruel corn, it still is not elegant for all occasions. He may think, for instance, that people should dress according to their chronological age rather than try to imitate teenagers in the choice of their clothing. Even if the reader maintains this opinion, he probably cannot fail to see that the writer has meant youthfulness and the opportunity to conceal one's chronological age as his main arguments. The EVIDENCE relation, for this reader, will be placed in the category of identifiability without acceptability.

It is also possible that some readers, while reading (11-12), find the text difficult to understand. When I myself first read the text, I was puzzled by the reference to "chic
and secrecy." I had to read the evidence to understand what was meant, and my perception was one of temporary unidentifiability.

The sample text does not manifest any obvious instances of unidentifiability, which is to be expected from an editorial of the New York Times. With the examples discussed above, however, I hope to have shown the overall principle of using articulated statements of relational propositions as tools for explicating some aspects of text comprehension.

5. Text-type-specific expectations as origins of inferences

Mann and Thompson (1988: 260) say that inferences about rhetorical structure are inevitable. "They are not invited inferences, Gricean implicatures or mere opportunistic inferences from available knowledge. Relational propositions are as inevitable as text structure itself." Mann and Thompson, however, do not explain what it is that makes the readers' inferences "inevitable." I have suggested above that one major source of inference about rhetorical structure is the reader's prior knowledge of text type, i.e. schematic knowledge which makes him expect a particular rhetorical structure.

In analogy with the constructivist hypothesis of literary vs. non-literary text comprehension which has been put forward by Meutsch (1989), I propose a text-type-specific constructivist hypothesis, according to which readers approach factual prose texts, such as newspaper articles, with specific expectations about their structure. Meutsch's proposal is that readers apply different "conventions" to reading literary versus non-literary texts. Aesthetic and polyvalence conventions are applied to literary reading, while truth and monovalence conventions are applied to non-literary reading. These different ways of reading imply different expectations, which guide the readers' text comprehension throughout the reading process. For example, they determine the readers' responses to gaps in coherence. Experienced readers of literature were observed to automatically apply the polyvalence convention, when reading what they judged to be literary texts, without letting ambiguity disrupt their reading.

My suggestion is that the constructivist hypothesis can be extended so that it applies not only to a distinction between literary versus non-literary reading but to various genres and text types of factual prose as well. According to my "text-type-specific constructivist" hypothesis, the reader of an editorial, for example, applies to the text a particular "editorial convention": the reader expects the text to take a stand, to express an argued opinion about a topical issue. It is this expectation which orientates the reader so that he can infer in an editorial those rhetorical relations which normally go
together with argumentation. These are, for instance, EVIDENCE, JUSTIFY and CONCESSION. The reader infers these largely by virtue of the expectation that they should be there rather than on account of structural signals in the text itself. This hypothesis gets support from an experimental study to be reported elsewhere (Tirkkonen-Condit, forthcoming).

The sample text is of the argumentative type. The relations EVIDENCE, JUSTIFY and CONCESSION are typical of argumentation; they belong to the argumentative scheme expected by the reader of an editorial. These typical relations can all be shown to derive from the argumentative process itself, i.e. from the implicit dialogue which the writer conducts with the reader. The argumentative process in turn is triggered off by perceived or anticipated disagreement with the reader, as has been shown, e.g. by Jackson (1987) and Jacobs (1987).

Enkvist (1981) has suggested experiential iconicity as an explanation of the structural patterns or 'text strategies' of particular text categories such as tourist guides. A typical tourist guide proceeds in the order in which the visitor is expected to move from one place to another and to look at one detail and then another. Spatial sequencing is typical of descriptive texts in general, as shown by Werlich (1976).

Argumentative texts, too, are iconically structured. The term processual iconicity, however, captures the essence of argumentation better than experiential iconicity. The writer begins argumentation at that point of the text where he or she anticipates disagreement from the reader's side. Contrastive sequences and the relations of ANTITHESIS, CONTRAST, EVALUATION, CONCESSION, EVIDENCE and JUSTIFY are the textual consequences of an argumentative phase in the writer's dialogue with the reader. The sequential organization of the text follows the anticipated dialogical process with the reader, i.e. the argumentative process which develops around disagreement.

Knowledge of the argumentative scheme is thus present both in the production and in the comprehension of an editorial text. It is a major source of inferences concerning the relational propositions in the text. Similar kinds of schematic knowledge are at work in the writing and comprehension processes of other types of texts.

The sample text discussed in this paper is an editorial. When composing an editorial, the writer can count on relatively clearcut expectations that readers have, however unconsciously, about the rhetorical structure of such texts. There is no need, therefore, to spell out the rhetorical propositions into "articulated statements", as has been done in the above analysis.
6. Conclusion

It was suggested in the above discussion that readers' ability to identify and accept relational propositions in a text may have a major role in their judgements of whether a text seems coherent. Types of text comprehension were defined (1) according to whether a relational proposition was immediately identifiable, identifiable after some further reading or not identifiable at all, and (2) according to whether the proposition was judged to be acceptable.

In order to describe their identifiability and acceptability, the relational propositions in the sample text were identified, articulated into statements and inserted into the text. This exercise showed that the sample text would probably manifest a relatively high degree of coherence to its readers in that its dominant rhetorical relations would probably be relatively unambiguously identifiable, with their acceptability depending on the readers' beliefs and values.

The dominant rhetorical relations in the sample text were virtually unsignalled, and were therefore left to the readers to infer. The discussion of the origins of the readers' inferences laid emphasis on text type, and suggested that it is largely by virtue of their schematic knowledge of editorials that readers have fairly specific expectations about dominant rhetorical relations. The readers expect, for instance, that an editorial will be argumentative rather than narrative by text type, and this expectation entails particular rhetorical relations.

Notes

1. I wish to thank Professors Nils Erik Enkvist and Dieter Viehweger for their comments on the earlier versions of this paper.

2. I have asked three academically educated Americans - two of them regular readers of the New York Times - to read the sample text carefully and to say what they thought was the main point of the text. There was a consensus about the main point as it is summarized above. I also asked the informants specifically whether the writer may have intended the text to be taken ironically, and they declined this possibility.

3. The formulations of the 'statements' of the relational propositions will be as close as possible to the original formulations suggested by Mann and Thompson (1988). Stylistic and other ad hoc adjustments have been deliberately avoided. Such stringency seems necessary, as the idea is also to test the delineation of the relation types.

4. It is not claimed here that the text will read as a fully natural or authentic text after the articulated relational propositions have been inserted. The insertion is necessary, however, as it enables judgement of the articulated propositions in each of the contexts where they appear.
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