Briefly Noted

Text and Texture: Patterns of Cohesion

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Norwood, NJ: Ablex Publishing Corp. (Advances in Discourse Processes 40, edited by Roy O. Freedle), 1991, xiv + 140 pp. Hardbound, ISBN 0-89391-695-1, $37.50

This book sets out to explore the global properties of texts, focusing on what is known as *texture*. Stoddard defines texture as

> ...the result of overlaying ...the patterns created by the readers' perceptions of the content, the rhetorical structure, and the linguistic structure of the physical text so that, at any given point in the reading process, the texture may be similar to or different from that at some other point. (p. 4)

The author hypothesizes that patterns of cohesion relations, displayed graphically, can illustrate the rudiments of texture. Thirty-five English texts taken from five genres (nonfiction, essays, biographies, novels, and short stories) are hand-labeled with three types of cohesion relations: definite articles, pronouns, and verbs with agent displacements (i.e., the verb's agent role is filled by a constituent not in the subject position). A text's "cohesion map" is created by assigning to each word a location on a two-dimensional grid corresponding to the word's position in the text (roughly, each sentence corresponds to a row), and then drawing a line between the location of a cohesive element and the location of its original referent. The resulting map looks somewhat like a column of hanging pine-needle bunches; thus texts can be compared visually for properties such as burstiness, density, and connection span. Each kind of cohesive element is assigned its own map, although for one example all three cohesion maps are superimposed.

The resulting maps seem to illustrate interesting differences among the texts. Unfortunately, the author neither describes how to analyze these maps nor explores the effects of multiple interacting types of cohesion elements. Instead, the analysis focuses on comparing text genres based on their overall "relative cohesiveness." The leap from elucidating a text's style or texture to comparing texts for relative cohesion on the basis of three syntactic cues (one of which tends to occur only rarely and almost never extra-sententially) is not well justified by the early parts of the book. Perhaps for this reason, there are two significant problems with the way relative cohesiveness is computed.

First, the author assumes that nonfiction text is less cohesive than other genres such as biographies and fiction (footnote, p. 55). By far the most frequently occurring of the three cohesion relations that the author examines is pronominal reference (p. 68); lexical cohesion relations are excluded. However, as the author points out, biographies and fiction tend to have many pronominal references, whereas nonfiction texts tend to have few pronominal references but many lexical cohesion relations. So in effect the result of the comparison is pre-determined. Despite these problems, the author concludes that the definitions and procedures used are satisfactory (p. 96).

The second problem with this analysis is that the comparison is based on a "cohesion index," which is determined by multiplying the average number of cohesive elements corresponding to a referent by the average distance between the elements and their referent. This number is meant to indicate the relative cohesiveness of a text, but does not discriminate between a referent that has only a few, distant references and a referent that has a large number of nearby references.

Bearing in mind that this is cross-disciplinary work (the author apparently originates from a literary field), a reader of *Computational Linguistics* may be put off by outdated references to the artificial intelligence literature and weak discussions of computational issues in general.

The author is to be commended for working with a large number of lengthy texts, a rare precedent in discourse analysis. The idea of graphically displaying the interactions of the syntactic cohesive elements is a useful one. The next important steps are to explore how to represent multiple interacting cue types, and how to analyze or interpret the resulting illustrations; this may lead to a better understanding of texture and cohesion in written texts. —*Marti Hearst, University of California, Berkeley*