

Abstract

In this paper basic structuring principles at the levels of text and clause will be compared by way of exploring the extent to which a rich functional grammar such as that exemplified in Halliday, 1985a [1994] can be used as a resource for reasoning about discourse structure. Specifically, the paper shows how categories and structures developed for analyzing clause grammar within a systemic functional linguistics framework can be extended to larger-than-sentence units, and therefore to whole texts of substantial length. In doing so the paper offers a new, functional grammatical perspective on the problems of text typology and multi-generic texts.

Keywords: genre; functional grammar; systemic linguistics; textual meaning; interpersonal meaning; ideational meaning.

1. Text and clause

Whether they acknowledge it explicitly or not, linguists' main source of inspiration for analyzing discourse structure comes from earlier work on phonology/graphology and grammar. Halliday (e.g., 1981, 1982) and Pike (e.g., 1982; Pike and Pike, 1983) are two of the linguists who have focused our attention on analogical structuring principles between text and clause, which reflect what we would now refer to as a fractal pattern of organization across levels in language (cf. Matthiessen and Halliday, in press).

In this paper several aspects of this fractal organization will be explored, drawing on the rich functional interpretation of English clause structure developed in Halliday, 1985a [1994]. It will be suggested that Halliday's functionally diversified analyses and their associated structur-

In particular it will be suggested that functionally diversified grammars such as those developed in systemic functional linguistics provide important insights into the different kinds of structure which not only organize small texts but which enable texts to be indefinitely expanded into larger ones. The discussion is of specific relevance to the nature of the unit being classified when issues of text typology are raised (e.g., Virtanen, 1992; Dingwall, 1992) and to the problem of multi-genericity in text description (e.g., Kress and Threadgold, 1988; Cranny-Francis and Martin, 1993).

2. Text structure—a preliminary perspective

Systemic functional linguistics approaches to genre analysis (e.g., Halliday and Martin, 1993; Hasan, 1977, 1979, 1984, 1985; Martin, 1985, 1992a, 1992b; Ventola, 1983, 1984, 1987) provide one example of the analogical reasoning from clause grammar to text structure noted above. Consider text (1):

(1)

Orientation

For one thousand years, whales have been of commercial interest for meat, oil meal and whalebone.

Record

About 1000 A.D., whaling started with the Basques using sailing vessels and row boats. They concentrated on the slow-moving Right whales. As whaling spread to other countries, whaling shifted to Humpbacks, Grays, Sperms and Bowheads. By 1500, they were whaling off Greenland; by the 1700s, off Atlantic America; and by the 1800s, in the south Pacific. Antarctic and Bering Sea. Early in this century, the Norwegians introduced explosive harpoons, fired from guns on catcher boats, and whaling shifted to the larger and faster baleen whales. The introduction of factory ships by Japan and the USSR intensified whaling still further.

Reorientation

The global picture, then, was a mining operation moving progressively with increasing efficiency to new species and new areas. Whaling reached a peak during the present century. [W. R. Martin, 1989: 1]

Generically, this text is a historical recount (Egins et al., 1987 [1993]; Disadvantaged Schools Program, 1991). Its function is to generalize across a set of experiences as they have evolved through time, in this case the history of international whaling. By borrowing the notion of constituency from grammar, we can interpret the genre as organized around three stages: Orientation, Record and Reorientation (after Plum,

1988; Rothery, 1990). Drawing on diagrammatic resources which have evolved for representing grammatical structure, we can represent this part-whole structure as the constituency diagram shown in Figure 1.

Constituency representation of this kind immediately raises two types of question. First, does the representation adequately describe what is coming in the text while the reorientation sums up what has already come. So the relation of the first stage to the second is both different from and similar to the relation of the second stage to the third. The functional labels 'orientation' and 'reorientation' go only part way towards making this explicit; and the constituency diagram itself does not clarify it. Rather it presents Orientation, Record and Reorientation as three parts of a whole (as with Actor, Process and Goal in an English clause); the relevant predictive and summative interdependencies are not represented. In this respect, the constituency analogy fails as a description of what is going on.

Second, can the representation be naturally extended to what could be there? For example, the historical recount under consideration here is prefaced with the title *Whaling*; and it continues with a description of shore-based whaling in Canada:

(1) [continued]

While this high-seas drama was unfolding, coastal, shore-based whaling developed around the world. In Canada, for example, it was native whaling for Belugas and Narwhal in the Arctic, and commercial whaling from northern Vancouver Island in the Pacific, and from Quebec, Nova Scotia and Newfoundland in the Atlantic.

Can these extensions simply be added to the constituency diagram as a fourth and fifth stage? If so, how can they be labeled? How would the different relationships between the title and the rest of the text and what we might call a record resumption or simultaneous record be portrayed? Beyond this, the whaling recount is preceded by a taxonomic report that classifies whales, and followed by another historical recount which reviews the history of international whaling management. And these texts form

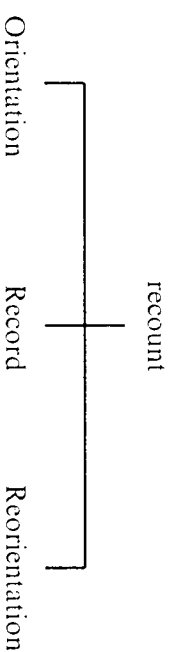


Figure 1. A constituency representation of text (1) (historical recount)

just part of a larger paper, whose published layout is organized by the headings below:

- Innovative Fisheries Management: International whaling
- ...
- Whales*
- ...
- Whaling*
- ...
- International Management*
- ...
- The Current Scene*
- ...
- Relevance to Canadian Fisheries Management*
- ...
- Demand Management
- ...
- Management Processes
- ...
- Information: ...
- Partnerships: ...
- Public participation: ...
- Jurisdiction: ...
- Perseverance: ...

Drawing a constituency diagram for texts of this complexity is of course not an issue; grammarians have certainly provided us with adequate tools. But such a diagram would show that the whales report, the whaling recount and international management recount relate to each other as parts of a whole in the same way that the title, orientation, record, reorientation and 'resumptive record' stages of the whaling recount do. And such a representation would not account for the different interdependencies among such parts.

In response to this challenge, this paper will now review the rich semantically oriented functional grammar developed in systemic functional linguistics, exploring for tools that might be exported towards a more adequate representation of both shorter and longer texts. Halliday's more adequately diversified approach to grammatical description will be briefly introduced in section 3. Then, in section 4, various analogies between his clause grammar and text structure will be exemplified. In section 5, the ability of texts to adapt to their environment, including their potential to renovate generic expectations, will be reviewed. Finally,

in section 6, the sketch of fractal resonance presented will be summarized and its relevance to the issue of text typology will be briefly discussed.

3. Modes of meaning in systemic grammar

Halliday (e.g., 1970a, 1974, 1978) offers a functionally diversified interpretation of the organization of grammatical systems, recognizing three major components (which he calls metafunctions): ideational, interpersonal and textual. Matthiessen (in press) glosses the work done by these components in terms of the orders of reality they construe: for him, ideational meaning is concerned with construing reality proper, interpersonal meaning with social reality, and textual meaning with the semiotic reality that manifests itself as ideational meaning and interpersonal meaning materialize themselves as text.¹ Halliday (1974) offers a complementary glossing, with ideational meaning as the observer function, interpersonal meaning the intruder function and textual meaning the relevance function. These interpretations of the contextual significance of these language intrinsic metafunctions are summed up in Table 1; for discussion of the significance of a metafunctionally organized grammar for contextual theory, see Martin, 1991a.

Alongside their implications for the organization of paradigmatic relations, Halliday suggests that the metafunctions give rise to distinctive forms of structural realization. Halliday (1974, 1979) and Matthiessen (1988, 1992) discuss the respects in which ideational meaning is oriented to a *particulate* form of realization, interpersonal meaning to *prosodic* realization and textual meaning to *periodic* realization (cf. Pike, 1982 on particle, wave and field perspectives in linguistic description).² Before exemplifying these, it is important to break down the ideational metafunction into its experiential and logical subcomponents, in order to distinguish between the 'part/whole' form of particulate realization associated with experiential meaning and the 'part/part' form of particulate realization associated with logical meaning (for further discussion see Martin, in press). These associations between metafunctions and the types of structure which realize them are summed up in Figure 2.

Table 1. Metafunctions and orders of reality

| Metafunction | 'reality construal' | 'work done' |
|------------------------------------|---------------------|-------------|
| Ideational (logical, experiential) | reality | (observer) |
| Interpersonal | social reality | (intruder) |
| Textual | semiotic reality | (relevance) |

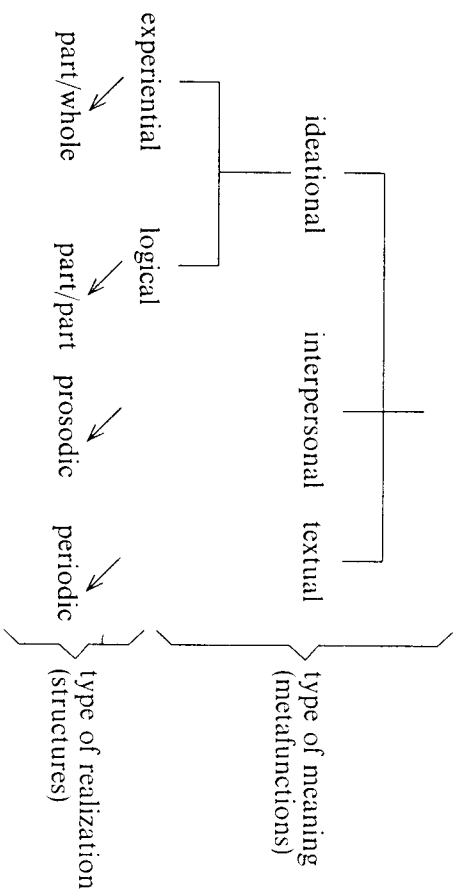


Figure 2. Metafunctions and types of structure

While there are long standing descriptive traditions in linguistics as far as the representation of particulate structure is concerned (*constituency* representation for experiential meaning and *dependency* representation for logical meaning), representations for prosodic and periodic structures are less well developed (cf. Matthiessen, 1988, 1992).

4. Modes of meaning in grammar and discourse

This section of the paper will be organized around the grammatically founded modes of meaning introduced above, beginning with the prosodic (4.1), followed by the particulate (4.2) and then the periodic mode (4.3).

4.1. Interpersonal analogy—prosodic realization

Prosodic realization refers to the way in which a particular kind of meaning spreads out across a structure, coloring the unit as a whole. One clear example of this form of realization from phonology is English *tone* (see Halliday, 1967, 1970b, 1985a), which unfolds in a continuous movement (rising, falling, rising then falling and so on) throughout a tone group. Similar patterns are found in grammar as well—in attitudinal nominal groups, for example, (Poynton, 1984) where positive or negative affect is realized continuously across adjectives and nouns (e.g., *you patronizing sexist bourgeois pig, my adorable sweet little darling boy*). A related form of opportunistic realization is found in the clause with respect to the system of *polarity*; most noticeably in nonstandard

dialects such as that spoken by the 'Marrickville maunder', former Australian boxing champion Jeff Fenech:

- (2) 'If you *don't* get *no* publicity you *don't* get *no* people at the fight,' he said.
'If you *don't* get *no* bums on seats you *don't* get paid ... Anyway I enjoy it.' (Fishman, 1990)

In this dialect, negative polarity dictates that wherever indefinite deixis is found in the clause it will be realized by *no* (compare standard English, which prefers *any* in this environment). A model of this sprawling realization is presented in Figure 3 (cf. *If you don't get any publicity for any fights in any papers from anyone ...* which uses the standard *any* forms to realize the prosody of negation).

Turning from clauses to texts, one way in which prosodic realization manifests itself is through repetition. As in the grammar, one effect of the repetition is an amplification of the interpersonal meaning in question. To see the effect of this pattern of realization, consider text (3), the song 'The Way It Is' by Bruce Hornsby and the Range, 1986 (for a related form of prosodic realization in Bruce Springsteen's 'Born in the USA' see Cranny-Francis and Martin, 1991). Musically, and lyrically, Hornsby's claim to fame depends on his ability to tap into the indulgent sentimental nostalgia that patriarchal men commonly mistake for feelings. 'The Way It is' fits snugly into a liberal humanist discourse of this kind.

Experientially, the song consists of three exempla, a kind of narrative whose social function is to comment moralistically on 'the way it is'. Plum's (1988) 'Incident Interpretation' structure thus recurs three times, with the chorus serving to interpret each 'incident' along similar lines. The effect of the repetition is cumulative, amplifying Hornsby's 'heartfelt' resignation. Third time round, his mild admonition 'Don't you believe them' is removed; in America, he implies, that's just the way it is.

| | |
|---------|--------------|
| Mood | Residue |
| Subject | Finiter: neg |

If you *don't* *get* *no publicity* *for no fights*

Figure 3. Interpersonal meaning realized as a prosodic polarity

(3) 'The Way It Is' (B. R. Hornsby)

Exempla (× 3)

Standing in line marking time —
 Waiting for the welfare dime
 'Cause they can't buy a job
 The man in the silk suit hurries by
 As he catches the poor old ladies' eyes
 Just for fun he says 'get a job'

Incident [1]

Chorus

Interpretation

That's just the way it is
 Some things will never change
 That's just the way it is
 But don't you believe them

They say hey little boy you can't go
 Where the others go

Incident [2]

'Cause you don't look like they do
 Said hey old man how can you stand
 To think that way
 Did you really think about it
 Before you made the rules
 He said, Son

Chorus

Interpretation

That's just the way it is
 Some things will never change
 That's just the way it is
 Ah but don't you believe them

[instrumental break]

{*That's just the way it is* × 2} {whispered}

Well they passed a law in '64

Incident (generalized) [3]

To give those who ain't got a little more
 But it only goes so far
 Because the law don't change another's mind
 When all it sees at the hiring time
 Is the line on the color bar, no

Chorus

Interpretation

That's just the way it is
 Some things will never change
 That's just the way it is
 That's just the way it is, it is, it is, it is ...

[instrumental fade]

Provisionally, then, it would appear that prosodic patterns are mapped across both clause-size and text-size units; and it would appear that one of the principles through which smaller texts expand is through interpersonally oriented repetition—whose function is to adjust the volume of the proposals (Martin, 1992a), propositions, probabilities, usualities, obligations, inclinations, abilities, feelings and evaluations under negotiation.

4.2. Ideational analogy—particulate realization

Ideational meaning involves a segmental construal of reality. Experimentally, the segments are construed as parts of a whole, each with a distinctive role to play. Logically, the segments are construed as an open-ended series of steps, with 'parts' dependent on each other and in general playing a similar role (without the closure implied by the notion 'whole').

4.2.1. Logical analogy—part/part realization

Unlike experiential structures, the structures realizing logical meaning are not in principle closed, precisely because they do not imply a whole. Rather they engender openness—a serialized progression from one meaning to the next, step by step, through interaction. This form of realization is illustrated in Figure 4 for dependency relations between clauses in the clause complex 4. *Bielak said that W. R. Martin thought that Greenpeace wanted whaling to stop soon*. The ongoing interdependency in this case has to do with PROJECTION—with saying or thinking ensuing clauses into existence (contrast the constituency relations diagrammed within each clause).

Clause complex interdependencies of this kind lie at the frontier of grammar, interfacing directly with discourse relations (Martin, 1992b; Matthiessen and Thompson, 1989). Because of this, they turn out to

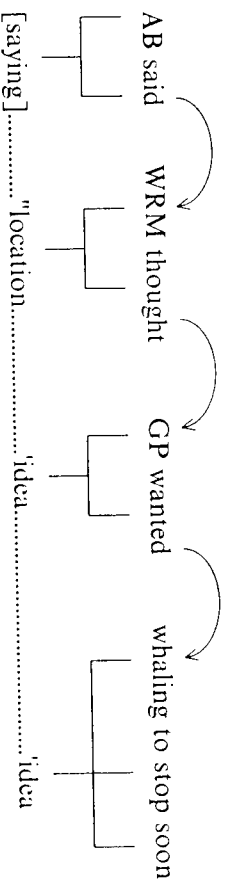


Figure 4. Logical meaning in the context of PROJECTION—dynamic movement in a part to part chain

provide a very rich resource of strategies for expanding smaller texts into larger ones (for a discussion of Mann and Thompson's [1987] rhetorical structure theory in relation to systemic functional linguistics, see Martin, 1992b: 249–264).

For Halliday (1985a) the critical logical variables have to do with the nature of the interdependency between clauses (paratactic or hypotactic) and the kind of logico-semantic relation involved (projection or expansion). Parataxis covers what would be described as coordination and apposition in traditional grammar; hypotaxis covers subordination, minus embedding (i.e., adverbial subordinate clauses but not relative ones; for discussion of the hypotaxis/embedding distinction and analogies to discourse organization see Matthiessen and Thompson, 1989). Projection refers to the use of mental or verbal processes to quote or report speech or thought; expansion refers to connections of elaboration (reformulation), extension (addition and alternation) and enhancement (temporal and causal) between clauses.

Subtypes of expansion and projection stand in marked and unmarked relations with parataxis and hypotaxis (Nesbitt and Plum, 1988). Parataxis (equal status) is strongly associated with projected locutions (quoted speech) and expanding extensions (e.g., *and*) and elaborations (e.g., *that is*); hypotaxis (unequal status) is strongly associated with projected ideas (reported thought) and expanding enhancements (e.g., *because*). These variables and unmarked associations are exemplified in Table 2.

Table 2. *Examples of hypotactic and paratactic expansion and projection (boxed examples represent unmarked associations of variables)*

| | Parataxis—equal status | Hypotaxis—unequal status |
|------------|---|---|
| Projection | locution idea | locution idea |
| Expansion | extension elaboration enhancement | extension elaboration enhancement |

| Parataxis—equal status | Hypotaxis—unequal status |
|---|--|
| He says 'Get a job.' | He said to get a job. |
| 'That's the way it is,' he believed. | He believed that was the way it was. |
| They were standing in line and marking time. | Besides standing in line they were marking time. |
| That's just the way it is: some things will never change. | That's just the way it is, which is too bad. |
| Did you really think about it and then make the rules? | Did you really think about it before you made the rules? |

4.2.1.1. *Projection*. As far as projected locutions are concerned, the analogy between clause complexing and text structure is a straightforward one. One text is quite commonly quoted by another. I will illustrate this here by quoting from Martin, 1992b: 310. This quotation (text [4]) includes a quotation from Halliday; and Halliday's text quotes through citation a number of examples of each type of expanding relation. Letting the names of authors stand for bodies of work instead of people (Matthiessen, 1991), this chain of interdependency can be expressed as a clause complex as follows: *Martin (this paper) says Martin (1992b) says Halliday (1985) says English speakers (various) say* ... Note that verbal processes are *not* used to project the wordings in text (4); the quoting involved is thus a feature of text organization, not grammatical projection.

(4)
Halliday's description of each relation, and examples of their realization between clauses are reviewed below:

Elaboration (=)
In ELABORATION, one clause elaborates on the meaning of another by further specifying or describing it. The secondary clause does not introduce a new element into the picture, but rather provides a further characterisation of one that is already there, restating it, clarifying it, refining it ...

That clock doesn't go: it's not working.
She wasn't a show dog: I didn't buy her as a show dog.
Each argument was fatal to the other: both could not be true.
(Halliday 1985a: 203)

Extension (=)
In EXTENSION, one clause extends the meaning of another by adding something new to it. What is added may just be an addition, or a replacement, or an alternative ...

I breed the poultry and my husband looks after the garden.
I said you looked like an egg: sir, and some eggs are very pretty, you know.
(Halliday 1985a: 207)

Enhancement (=)
In ENHANCEMENT, one clause enhances the meaning of another by qualifying it in one of a number of possible ways: by reference to time, place, manner, cause or condition ...

It's the Cheshire cat: now I shall have somebody to talk to.
The three soldiers wandered about for a minute or two, and then quietly marched after the others.
(Halliday 1985a: 211)

Quoted text is usually clearly identified as such by various graphological conventions in writing, where this principle of text expansion is far more common than in speech. In spoken language, it is clauses rather than slabs of text that tend to be projected through quotation, since in most contexts very few texts can be reconstituted word for word. Since the deixis (for person, tense and temporal circumstantiality) of the quoted material in texts like (4) maintains its original orientation (cf. *I'm going now vs. he said he was going then*), the projecting and quoted material can be said to have equal status (as with paratactically related clauses in a projecting clause complex). As far as I can tell, it is not possible for texts to 'report' locutions; hypotaxis is not opposed to parataxis at the level of macro-genres (cf. Mathiessen and Thompson, 1989 who argue that the distinction is relevant for text expansion—through elaboration, extension and enhancement).

It might also be argued that meaning cannot be reported at the level of text structure (understandably so, since texts can 'talk' but not think—e.g., *The report says that ...*, not **The report thinks that ...*). If, however, we bring figures, graphs, tables, diagrams and so on into the picture, then the possibility of *projected ideas* seems a viable one. The drawing of a projecting clause complex in Figure 4, for example, transcends the grammar of English, making use of alternative forms of representation: interdependency arrows and constituency trees. This form of diagrammatic representation might well be approached as a semiotic system in its own right, inviting deconstruction along the lines of suggestions by Kress and van Leeuwen (1990a, 1990b) for images. But seen from the perspective of language, the figure can be interpreted as a projection of the 'content' developed in the preceding paragraph, bypassing its actual wording.

Another example of projected meaning of this kind is presented in text (5) below, quoting again from Martin, 1992b: 159–160. In this text, Halliday's clause complex analysis, which was projected as Table 2 above, is given an alternative projection in the form of a system network. Once again, the projection itself instantiates a designed semiotic system, contrived by systemists and deserving of analysis. At the same time, the function of system networks of this kind in systemic theory needs to be kept in mind—namely that of providing an alternative consolidating form of representation for meanings that have been discursively developed as text. It is this reporting function that is under focus here.

(5)

... This is especially true with conjunctive relations, since it is in this area that Halliday 1985a: 192–251 has elaborated his grammatical description to the point

where very long passages of spontaneous spoken monologue are netted in. His clause complex analysis has in other words pushed grammatical description to new frontiers, and it is to the limits of these that this chapter first turns. Halliday's 1985a: 197 paradigm for clause complex relations is formulated systematically as Figure 4.1, along with notational conventions for analyzing the dependency relations involved. The network distinguishes both the type of interdependency (paratactic or hypotactic) and the kind of logico-semantic relation involved (projection or expansion).

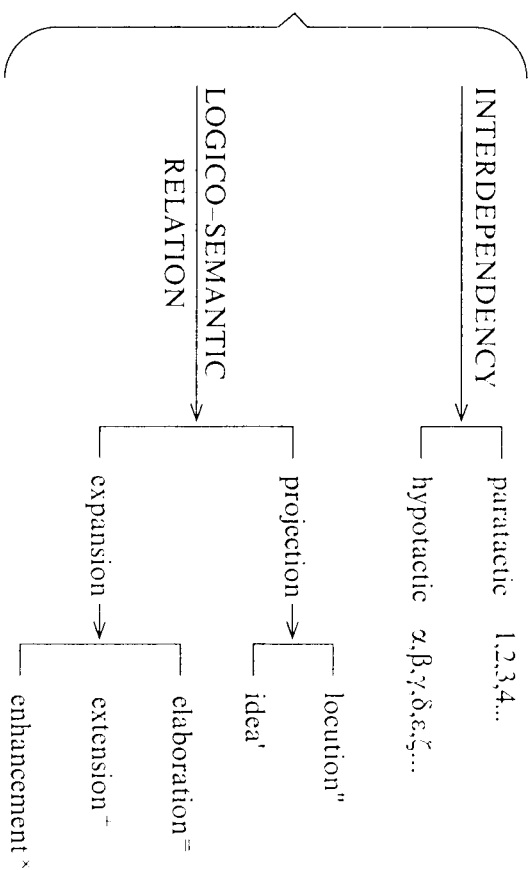


Figure 4.1. Halliday's 1985a description of clause complex relations

This analysis is illustrated for text [4: 1] below (taken from the research reported in Plum 1988) ...

Once again, as far as I can tell, the opposition of parataxis to hypotaxis is not relevant at the level of text structure, so the question of quoting meaning does not arise.

Note again that the interpretation of projection being developed here is intended to complement, not to replace, readings of tables, figures, diagrams and so on as images (following Kress and van Leeuwen, 1990a, 1990b). Treating these images as projected meanings allows us to focus on the semantic dependency between these images and the texts including them (which is of course mediated by the captions relating these projections to the texts projecting them, and any wording included in the images themselves); but the grammar of these images remains an important question in its own right.

4.2.1.2. *Expansion.* With expansion, one clause expands another by elaborating it, extending it or enhancing it. Following Halliday, 1985a: 196–197, *elaboration* involves restating in other words, specifying in greater detail, commenting or exemplifying; *extension* involves adding some new element, giving an exception or offering an alternative; *enhancement* involves embellishing with circumstantial features of time, place, cause or condition.

Text structures developed through expanding relations, as we shall see, often afford the possibility of an alternative or simultaneous part/whole interpretation. Text (1), for example, will be used below to illustrate elaboration, whereas in section 1 above the same text was given a constituency-oriented 'Orientation^Record^Reorientation' interpretation. In this case the readings are complementary: the expansion reading brings out the respect in which the stages in the recount paraphrase each other, while the constituency reading brings out the intertextual relationship between this and other narrative-type genres (for which see Hasan, 1984; Plum, 1988; Rothery, 1990).

Elaboration will be exemplified here by referring again to text (1). In this text the title (*Whaling*) is first elaborated as a clause (*For one thousand years, whales have been of commercial interest for meat, oil, meal and whalebone*); this clause is then unpacked in the remainder of the text's initial paragraph as the history of whaling; this history is then repacked as paragraph 2 (including the critical nominalization *a mining operation moving progressively with increasing efficiency to new species and new areas*). Each of these steps in the text's development involves restatement as ideational meaning is explored at more and less specific levels of generality.

(1) *Whaling* [historical recount]

For one thousand years, whales have been of commercial interest for meat, oil, meal and whalebone.

About 1000 A.D., whaling started with the Basques using sailing vessels and row boats ...

The global picture, then, was a mining operation moving progressively with increasing efficiency to new species and new areas. Whaling reached a peak during the present century. [W. R. Martin, 1989: 1]

When elaboration is deployed as waves of generality and specificity in this way, texts lend themselves to reinterpretation from the perspective of periodic structure and textual meaning. Following Martin, 1991b, 1992b, 1993, the first clause of text (1) can be treated as a hyper-Theme

(point of departure for the text as a whole) and the last two clauses as hyper-New (distillation of the news developed through the text). Note that text (1) has now been deconstructed from the perspectives of particulate (constituency) and periodic structure; both readings are required in order to do justice to the text's experiential and textual meaning. In systemic functional linguistics, metafunctional dialogism of this kind is an integral feature of the interpretation of both text and clause structure (for a very helpful discussion of metafunctional dialogism in the clause, see Matthiessen, to appear).

In order to illustrate extension (adding some new element, giving an exception or offering an alternative), we will move on to the environs of text (1), including the rest of its section, and consider the paper 'Innovative fisheries management: International whaling' as a whole. The paper begins with a title which is then unpacked in an introductory paragraph before being elaborated by the paper as a whole. This elaboration is itself divided into five sections: i. Whales, ii. Whaling, iii. International management, iv. The current scene and v. Relevance to Canadian fisheries management. Sections i, ii, iii and iv are interrelated by extension—a historical report on the current scene is added onto a historical recount on international management which in turn extends a historical recount on whaling which is itself an extension of a scientific report on whales.

These four sections are relatively independent of each other, and so can be treated as having equal status in the paper. The logic of their presentational sequence is textual rather than ideational; different sequences of presentation are possible with almost no repercussions for the wording of the individual sections themselves. The introduction to the paper, and sections i and ii are presented in full, along with the section headings and subheadings from the rest of the paper, as text (6) below. Halliday's notational conventions for expansion, presented in text (5) above, have been used to show the way in which elaboration, extension and enhancement have been used to develop the macro-genre (logico-semantic relations within sections have not been noted; for enhancement see section 4.1.2.3 below):

(6) *Innovative Fisheries Management: International whaling*

There is much to be learned from the evolution of international fisheries management that is applicable to the development of fisheries management in Canada. An interesting case is the management of whaling which I have had the opportunity to follow for a few decades. So, I have decided to focus on whaling as an example of innovative fisheries management, and summarize my perspective under the headings of whales, whaling, international management, the current

scene, and some observations about its relevance to the development of Canadian fisheries management.

= *Whales* [taxonomizing report]

+ ... (see text (9) below)

= *Whaling* [historical recount]

+ ... (= text (1/1') above)

International Management [historical recount]

+ ...

The Current Scene [historical report]

+ ...

×³

Relevance to Canadian Fisheries Management [recommendations]

+ ...

Demand Management

+ ...

Management Processes

+ ...

Information: ...

Partnerships: ...

Public participation: ...

Jurisdiction: ...

Perseverance: ...

Enhancement (embellishing with circumstantial features of time, place, cause or condition) is illustrated in text (7), a report on dog racing. The sport is defined, then briefly described, before moving on to a description of dog-racing tracks in the second paragraph. At this point the text changes gears; it stops its generic construal of dog racing as a 'thing' and shifts to an explanation of the *manner* in which dog races occur. This activity is broken down, step by step, as a process, in the third paragraph by means of an explanation genre (see Christie et al., 1991). The report then resumes with generic description of betting as a thing (note that betting as a process is not explained).

(7) [Report, enhanced by an explanation]

Dog racing, also called *greyhound racing*, is a sport in which greyhounds compete on an oval track. The dogs chase a mechanical lure that resembles a rabbit. The lure moves around the track on an electric rail. Dog racing developed from *coursing*, an ancient sport in which two dogs chased a live rabbit over an open

field. A mechanical rabbit is also an effective lure because greyhounds chase by sight rather than by scent.

Most dog-racing tracks are 1/4 mile (0.4 kilometre) in diameter. Eight greyhounds compete over a distance of 7/16, 3/8 or 5/16 of a mile (0.7, 0.6 or 0.5 kilometre). Champion greyhounds run faster than 40 miles (64 kilometres) per hour.

× Before each race, the greyhounds are put into individual stalls in a starting box. The lure is then started around the track. When the lure is opposite the starting box, the doors of the stalls are opened, and the dogs are released. During the race, the lure is kept several yards ahead of the leading dog. The lure is moved out of sight of the dogs after they cross the finish line, and they stop running.

Dog racing is a popular sport in parts of the United States and several other countries. Fans bet on the greyhounds through the pari-mutuel system. This system is also used in horse-racing (see HORSE RACING [Betting]). In the United States, bets on dog races total more than \$1 billion yearly. George D. Johnson, Jr. [*The World Book Encyclopedia D* Volume 5. Chicago: World Book, Inc.]

Explanations typically appear as enhancing expansions of reports in just this way. Like other enhancing texts, explanations are generally dependent on the texts they expand. Text (7) for example is perfectly coherent without its enhancing explanation, but the same cannot be said for the explanation on its own (the phoric nominal groups *each race*, *the greyhounds*, *the lure*, *the track*, for example, all presume information from the preceding sections of the report). Similarly, the place at which the explanation occurs is important; it cannot be easily moved around as with the extending texts considered above.

In summary then, texts can be organized with respect to all five of the projection/expansion strategies noted by Halliday for the English clause complex: projected locution ("), projected idea ('), expanding elaboration (-), expanding extension (-), and expanding enhancement (-). While the distinction between parataxis and hypotaxis is not a systematic opposition at the level of text structure, projected locutions and expanding elaborations and extensions have relatively equal status with the text initiating them (they can stand on their own), whereas projected ideas and expanding enhancements have a more dependent status with respect to the text that dominates them (they are not free standing elements).

4.2.2. *Experiential analogy—part-whole realization*

Experientially, the English clause is a theory of goings-on and their parts. Integrating this segmentation is a theory of nuclearity, with a process and closely related participant at the centre, circumstantial relations towards the periphery, and other participant relations in between. This

model of reality is outlined in Figure 5 for part of the whaling recount introduced as text (1) above: *Early in this century the Norwegians introduced explosive harpoons ...* (following Halliday's [1985a] ergative interpretation of the English clause).

Although we are restricting our grammatical discussion here in general to clause rank patterns, it is important to note that clause segments may themselves be construed as wholes with parts and that this pattern continues in grammar until the smallest units of meaning, the morphemes, are reached. This kind of extension is outlined in Figure 6, where the clause's groups and phrases are broken down into their constituent parts. In systemic grammar this kind of segmentation proceeds in principle by rank, the details of which have been abbreviated here.

As can be seen from Figures 5 and 6, this experiential segmentation is

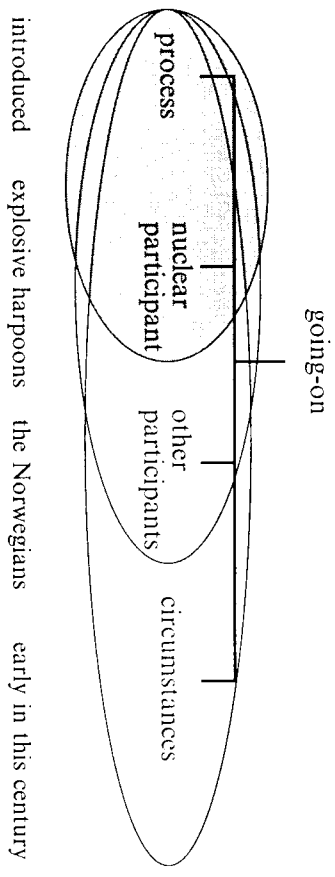


Figure 5. Experiential meaning realized as parts and whole—transitivity

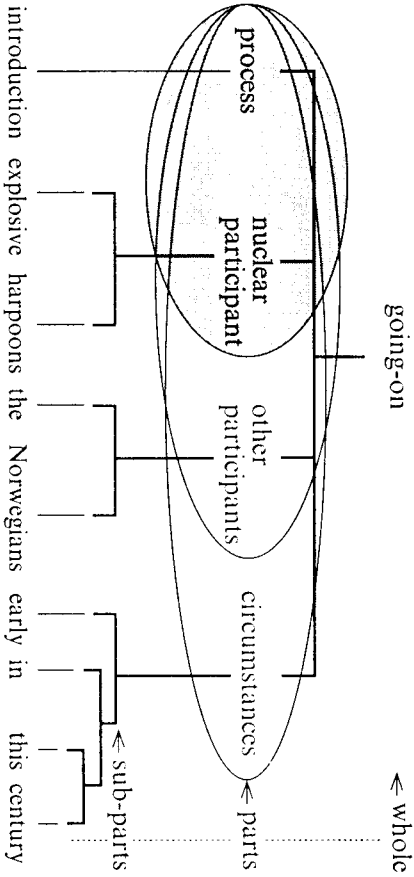


Figure 6. Extending part-whole segmentation to lower ranks

in principle closed—there are a delimited number of segments at each rank in the grammar and a finite number of ranks. In order to overcome this closure, and renew its construal of reality, experiential meaning makes use of embedding: the process whereby wholes are included as parts. This synoptic strategy for elaborating meaning potential is illustrated in Figure 7 for one textual variation on the example in Figure 6. *[[What the Norwegians did]] was [[introduce explosive harpoons]].*⁴ In this example two clauses, *what the Norwegians did* and *introduce explosive harpoons*, are embedded in the relational identifying clause meaning 'x is represented by y'. This embedding expands the meaning potential associated with Value (the more abstract meaning) and Token (its instantiation), compared with that available in clauses like *The largest is the Sperm whale* where nominal groups fill the Value (*the largest*) and Token (*the Sperm whale*) functions.

Seen from a systemic functional linguistics perspective, the notion of constituency has a tendency to be overused by linguists, even at the level of grammar where it provides an important perspective on the experiential organization of the clause. It has certainly been overworked at the level of text structure, where it afforded initial breakthroughs, but has since tended to efface interpersonal, logical and textual considerations. Nevertheless, it is important to pursue the experiential analogy at the

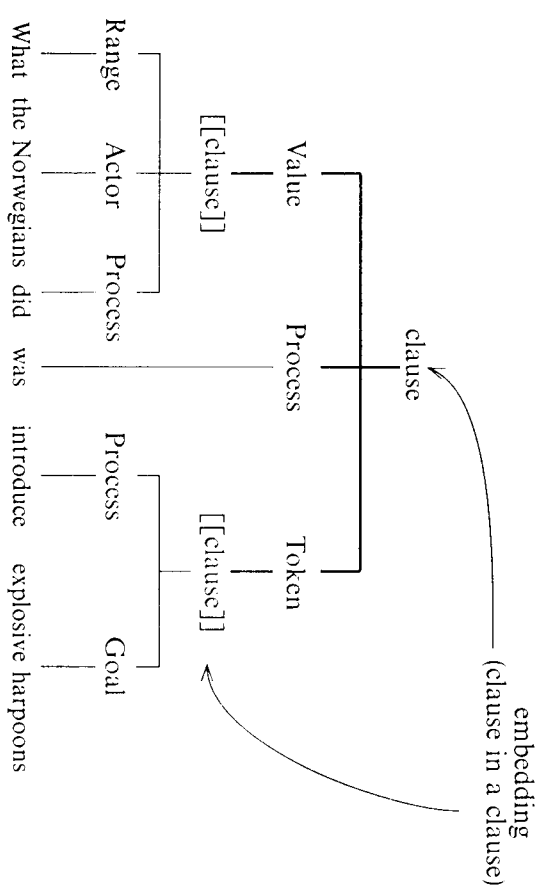


Figure 7. Embedding—removal of experiential segmentation at lower ranks

level of text since it does provide, especially in writing, an important perspective on the way in which a small text might expand.

The notion of part-whole staging has already been illustrated with respect to text (1) above—the historical recount consisting of the stages ‘Orientation’ ‘Record’ ‘Reorientation’.⁵ The notion of parts and whole is complicated in the grammar by the fact that parts themselves may be construed as wholes with parts of their own (the notion of ‘rank’) and by the fact that wholes may take the place of parts in order for experiential meaning to renew its meaning potential (the notion of *embedding*). Here we will first illustrate a hierarchy of ranks, and then embedding, for text structure.

4.2.2.1. *Rank (layers of constituency)*. The notion of layers of staging has been widely used in semiotic theory. Barthes for example discusses its application to narrative sequencing in the quotation below:

It (a sequence) is also founded *a maximo*: enclosed on its function, subsumed under a name, the sequence itself constitutes a new unit, ready to function as a simple term in another, more extensive sequence. Here, for example, is a micro-sequence: *hand held out, hand shaken, hand released*. This *Greeting* then becomes a simple function: on the one hand, it assumes the role of an indice (flabbiness of Du Pont, Bondi’s distaste); on the other, it forms globally a term in a larger sequence, with the name *Meeting*, whose other terms (*approach, halt, interpellation, sitting down*) can themselves be micro-sequences. (Barthes, 1977: 102–103)

His analysis involves three layers (or ranks): a meeting (or greeting) sequence which consists of five stages, the fourth of which breaks down into three subparts:

meeting (greeting):
 approach^halt^interpellation^hand held out^hand shaken^hand released^sitting down

Layered staging of this kind is relatively unconscious and contrasts in this respect with the designed layering of other areas of human activity—for example professional tennis, where a season’s play consists of a number of tournaments, tournaments of one or more matches, matches of three to five sets, sets of six or more games, games of four or more points, points of one or more strokes (beyond which point segmentation slips below consciousness again, unless it is made visible through coaching).

4.2.2.2. *Embedding (genre inside a genre)*. With embedding, a whole genre is made to function as one stage in the development of text; embedding is easiest to recognize when this stage is an obligatory element

of structure. Embedding of this kind is found in text (8) below (from Mann and Thompson, 1992). Generically this text is a solicitation—a macro-proposal designed to raise money for Zero Population Growth, an American organization concerned with overpopulation. Experientially it consists of an ‘involvement’ stage designed to get the attention of readers, a ‘product’ stage giving particulars of the service offered, and an ‘appeal’ section directly soliciting money from potential benefactors.⁶ What is interesting in text (8) is that the Involvement stage is itself realized by another genre, a news story, with its own experiential structure of ‘Lead’ and ‘Lead Development’ (Ledema et al., to appear). This renewal of meaning potential in the solicitation genre’s first stage is outlined in Figure 8.

Detailed analyses of text (8) from a number of different analytical perspectives are included in Mann and Thompson, 1992. The text is presented only in broad outline here, divided into the generic stages summarized in Figure 8.

(8) *Involvement* [[News story genre]]

Lead

At 7:00 a.m. on October 25, our phones started to ring. Calls jammed our switchboard all day. Staffers stayed late into the night, answering questions and talking with reporters from newspapers, radio stations, wire services and TV stations in every part of the country.

Lead Development

When we released the results of ZPG’s 1985 Urban Stress Test, we had no idea we’d get such an overwhelming response. Media and public reaction has been nothing short of incredible!

At first, the deluge of calls came mostly from reporters eager to tell the

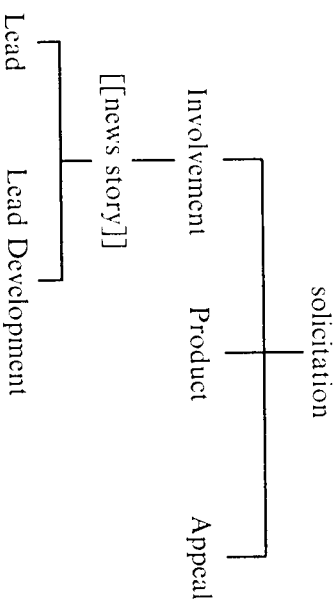


Figure 8. Embedding in text (8) (a news story embedded in a solicitation)

public about Urban Stress Test results and from outraged public officials who were furious that we had 'blown the whistle' on conditions in their cities.

Now we are hearing from concerned citizens in all parts of the country who want to know what they can do to hold officials accountable for tackling population-related problems that threaten public health and well-being.

Product

ZPG's 1985 Urban Stress Test, created after months of persistent and exhaustive research, is the nation's first survey of how population-linked pressures affect US cities. It ranks 184 urban areas on 11 different criteria ranging from crowding and birth rates to air quality and toxic wastes.

The Urban Stress Test translates complex, technical data into an easy-to-use action tool for concerned citizens, elected officials and opinion leaders. But to use it well, we urgently need your help.

Our small staff is being swamped with requests for more information and our modest resources are being stretched to the limits.

Appeal

Your support now is critical. ZPG's 1985 Urban Stress Test may be our best opportunity ever to get the population message heard.

With your contribution, ZPG can arm our growing network of local activists with the materials they need to warn community leaders about emerging population-linked stresses before they reach crisis stage.

Even though our national government continues to ignore the consequences of uncontrolled population growth, we can act to take positive action at the local level.

Every day decisions are being made by local officials in our communities that could drastically affect the quality of our lives. To make sound choices in planning for people, both elected officials and the American public need the population-stress data revealed by our study.

Please make a special contribution to Zero Population Growth today. Whatever you give—\$25, \$50, \$100 or as much as you can—will be used immediately to put the Urban Stress Test in the hands of those who need it most.

4.3. *Textual analogy—periodic realization*

Textual meaning, as noted above, construes semiotic reality—it organizes ideational and interpersonal meaning as coherent and relevant text (for discussion see Matthiessen, 1992). In English, at clause rank, the textual metafunction typically accomplishes this by establishing complementary peaks of prominence at the beginning and end of the clause. Initial prominence is grammaticalized as Theme, the speaker's point of departure for the message; final prominence is constructed through intonation, with a tone group's major pitch movement confirming part of the message as New. This unmarked complementarity of Theme and New (*where I'm*

coming from over to where you're going to) construes the clause textually as a wave of information, as outlined in Figure 9.

Textual waves of this kind are a feature of higher levels of organization in text and the resulting 'hierarchy of periodicity' (see Halliday in Thibault, 1987: 612) plays an important part in our interpretation of text structure. As noted above, text (1) begins with a hyper-Theme (the topic sentence of traditional composition teaching): *For one thousand years, whales have been of commercial interest for meat, oil, meal and whalebone.* This hyper-Theme makes precise predictions about the pattern of clause Themes which follows (it predicts the text's method of development in Fries [1981 (1983)] terms): *about 1000 A.D.: as whaling spread to other countries; by 1500; by the 1700s; by the 1800s; early in this century; while this high seas drama was unfolding.*⁷

At the same time, text (1) can be read retrospectively, in terms of its hyper-New: *The global picture, then, was a mining operation moving with increasing efficiency to new species and new areas.* The text's hyper-New has the complementary function of consolidating what Fries calls a text's point—the information it constructs as news. The consolidation makes the point of text (1) portable, enabling it to participate in higher level waves of information in the paper as a whole. This interplay of prediction and consolidation is outlined in Figure 10.

Higher levels waves of information are a particularly important structuring principle, especially in written text. W. R. Martin's paper for example is introduced by Bielak, the program chairman; W. R. Martin in turn introduces the staging of his paper (see text [6] above); and he

Early in this century the Norwegians introduced explosive harpoons...

| | |
|-------|---------|
| Theme | Rheme |
| Given | ? ← New |

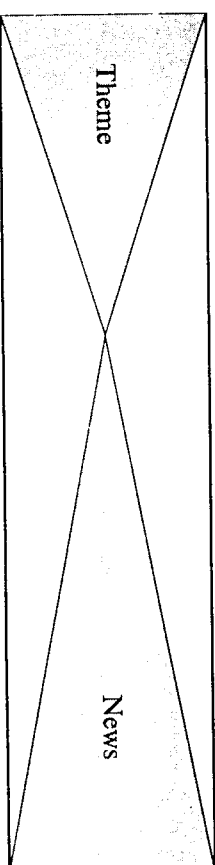


Figure 9. Clause rank textual meaning as a wave (complementary pulses of prominence)

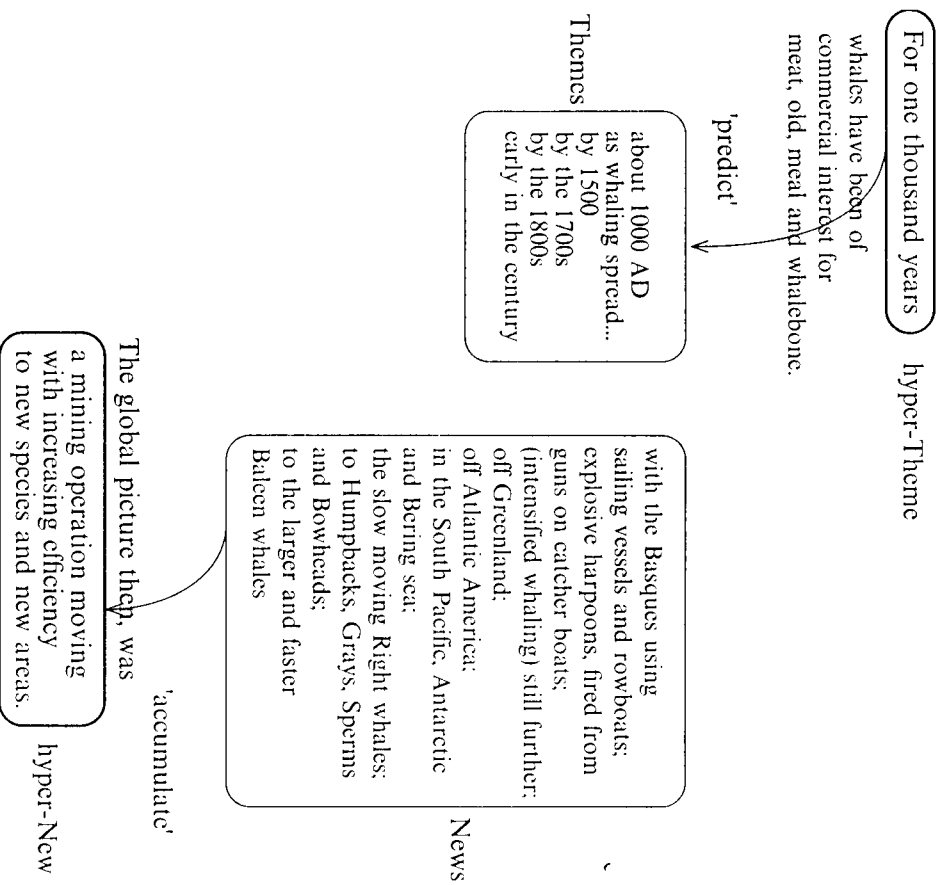


Figure 10. Prediction and consolidation of information in text (1)

introduces his whaling recount as we have seen. This hierarchy of introductions can be interpreted textually as a hierarchy of Themes:

In the same spirit, the Fisheries Committee Chairman, Dr. Robert Martin, has, on behalf of the CWF, invited some very distinguished speakers from across Canada to tell you something about innovative fisheries management being practised in their neck of the woods. (Bielak's introduction to the papers, 1989a: v)

[predicting ...]

So, I have decided to focus on whaling as an example of international innovative fisheries management, and summarise my perspective under the headings of whales, whaling, international management, the current scene, and some observa-

tions about its relevance to the development of Canadian fisheries management. (W. R. Martin's introduction to his paper, 1989: 1)

[predicting ...]

For one thousand years, whales have been of commercial interest for meat, oil, meal and whale-bone. (W. R. Martin's introduction to his whaling recount, 1989: 1)

[predicting ensuing clause themes ...]

about 1000 A.D. ...

At the same time the publication as a whole is structured with respect to a hierarchy of news. W. R. Martin consolidates the point of his whaling recount (*a mining operation* ...), and then draws directly on this consolidation in his recommendations (*the whaling experience of mining whale resources* ...);⁸ later in his program chairman's synthesis, Bielak consolidates the point of Martin's paper as a whole:

... The global picture, then, was *a mining operation* moving progressively with increasing efficiency to new species and new areas. (W. R. Martin's summary of his whaling recount, 1989: 1)

[... summing up history of whaling]

In spite of the whaling experience of mining whale resources until innovative approaches could be applied to whaling management, we continue to mine our high seas fisheries resources. (W. R. Martin's invocation of his whaling recount in his recommendations, 1989: 3)

[... summing up the history of whaling and international management]

Dr. Martin's presentation on international whaling gave us food for thought. Despite strong science which indicated a clear need for the protection of various whale species, the environmental movement was the key catalyst in focussing public attention on the issues, and this only after fifty years. (Bielak's summary of W. R. Martin's paper in his program chairman's synthesis, 1989b: 27)

[... summing up W. R. Martin's paper]

The point being developed here is that textual meaning construes semiotic reality with respect to a hierarchy of periodic structure. The complexity of this hierarchy is in principle dependent simply on the amount of semiotic reality being organized: the more meanings made, the more elaborate the levels of periodic structure needed to make them digestible as read and retrievable when stored.

Applying this framework to the whole of Bielak, 1989c gives us the picture in Table 3, beginning with the outermost wave and working in. Periodic structure within the papers has not been included here.

Table 3. *Waves of theme and new in Bielak, 1989c*

| <i>Layers of 'theme'</i> | <i>Layers of 'news'</i> |
|--------------------------|--|
| Table of contents | Biographies (of authors) |
| Introduction (Bielak) | Program chairman's synthesis (Bielak) |
| Martin's introduction | ... his concluding 'Relevance to fisheries management' |
| Griggs' introduction | ... his concluding 'Problems and future directions' |
| Beamish's introduction | ... his summary |
| Coté's introduction | ... his 'Conclusion' |

It is important to note in passing that the periodic structure just outlined is partly masked by the particulate organization of the publication as a whole, as summarized in its table of contents. The overall particulate structure is as follows, presented here by way of contrast with Table 3:

| | |
|--|---|
| Editor's note (Bielak) | x |
| Introduction (Bielak) | = |
| Innovative fisheries management: International whaling (Martin) | + |
| Innovations in fisheries management on the west coast (Griggs) | + |
| Innovations in fisheries management in central and northern Canada (Beamish) | + |
| Innovative fisheries initiatives in eastern Canada (Coté) | , |

Tables [1–5]

= Program chairman's synthesis (Bielak)

+ Biographies [Martin, Griggs, Beamish, Coté, Bielak]

Simply to complete the picture, it is also worth noting that professional scientific drawings of fish and whales are included on every odd-numbered page of the publication as a whole and on its front and back covers. None of these is specifically projected by the text itself, although species 'relevant' to the discussion are included in each section (i.e., whales in W. R. Martin's paper, fish elsewhere). The fact that these drawings are

not projected, and are realized continuously through the text, indicates that their function is interpersonal rather than ideational—'decorative' rather than 'instrumental' in the *Innovative fisheries management initiatives* publication as a whole (Bielak, 1989c).

5. Contextual conditioning—text as a dynamic open system

Like all evolved systems, including semiotic and nonsemiotic ones, a system such as genre is a dynamic open system (see Lemke, 1984). As such it is metastable (cf. Mathesius, 1964 on static oscillation), something that can only be achieved through continual exchange of information with the environment. It is through this ongoing exchange that systems evolve.

Seen from the perspective of metastability, the resources for genre organization and development outlined in section 4 above can be reinterpreted as generic resources for adjusting social processes to their environment. Expansion resources in particular are especially valuable in this respect. To illustrate contextual adaptation of this kind, consider text (9) below (from text [6] above). This text is a scientific report written by a marine biologist which constructs an uncommon sense classification of whales. The occasion of the paper as a whole is the 1989 meeting of the Canadian Wildlife Federation; the paper was delivered as part of a panel of presentations concerned with innovative fisheries management. The Canadian Wildlife Federation is for the most part an organization of anglers, hunters and other 'harvesters' who are in general concerned with managing the environment as a renewable resource. The overall thrust of the panel's recommendation is that Canadian freshwater fisheries should be developed for recreational rather than commercial fishing purposes.

(9) Whales

There are many species of whales. They are conveniently divided into toothed and baleen categories. The toothed whales are found world-wide in great numbers. The largest is the Sperm whale, which grows to about the size of a boxcar. Other species familiar to Canadians are the Beluga or white whale, the Narwhal with its unicorn-like tusk, the Killer whale or Orca, the Pilot or Pothead whale, which is commonly stranded on beaches, the Spotted and Spinner Dolphins that create a problem for tuna seiners, and the Porpoises which we commonly see along our shores.

+ There are fewer species of the larger baleen whales, that filter krill and small fish through their baleen plates. The largest is the Blue whale which is seen frequently in the Gulf of St. Lawrence. It reaches a length of 100 feet and a weight of

200 tons, equivalent to about 30 African elephants. The young are 25 feet long at birth and put on about 200 lbs. a day on their milk diet. Other species are: the Fins which at a length of 75 ft. blow spouts of 20 ft., the fast swimming Seis, the Grays so commonly seen on migrations along our Pacific coast between Baja California and the Bering Sea, the Bowheads of Alaskan waters, the Rights, so seriously threatened, the Humpbacks enjoyed by tourists in such places as Hawaii and Alaska, the smaller Bryde's whales, and the smallest Minke whales, which continue to be abundant worldwide.

^x *As with the growing interest in birding, increasing numbers of whale watchers can distinguish the various species of whales.* (W. R. Martin 1989: 1)

Of special interest here is the enhancing final paragraph, which on the face of it seems out of place in this report. Synoptically speaking, embellishing the report with this comparison between bird watching and whale watching is unpredictable; certainly it adds nothing to the classification of whales constructed in the two preceding paragraphs. Ecologically speaking, however, given the social context of this report, the enhancement is more than appropriate. It makes an important connection between the recreational use of whales and birds, which is of considerable relevance to the panel's recommendations for the future of freshwater fisheries. Indeed, this enhancement is strongly predicted throughout text (9), where technical nominal groups are elaborated wherever possible to make connection with the more familiar everyday experiences of this audience of nonscientists:

'the Sperm whale, which grows to about the size of a boxcar'
 'the Beluga or white whale'
 'the Narwhal with its unicorn-like tusk'
 'the Killer whale or Orca'
 'the Pilot or Pothead whale, which is commonly stranded on beaches'
 'the Spotted and Spinner Dolphins that create a problem for tuna seiners'
 'the Porpoises which we commonly see along our shores'

The text in other words exploits the openness inherent in the semiotic system of genre from which it derives. For another example of this kind of environmental response, consider text (10), from a junior secondary science textbook. Generically this text is an explanation, which is itself enhancing part of chapter-long taxonomizing report on micro-organisms. Before concluding the explanation is itself embellished with a comment on one effect of the life cycle of the malaria parasite—tourists' need for special medication when visiting 'malaria' countries. This enhancement is motivated by ideological tension within science education in general,

one response to which has been to publicly rationalize science as useful and relevant.

(10) Malaria parasite explanation (Junior Secondary science textbook)

[One such protozoan is the malaria parasite, the cause of malaria fever in man and other warm blooded vertebrates (Figure 8.4).]

^x The parasite enters the red blood cell where it feeds and grows until it fills almost the total volume of the cell. It then divides into a number of offspring. When the cell breaks up, the young and various waste products are set free into the circulating blood of the infected person. These toxic wastes cause an attack of chills and fever. The offspring next enter new red blood cells and repeat the above story producing new batches of offspring. In this way there are soon produced millions of parasites which destroy a large percentage of the red blood cells.

If a mosquito bites and sucks blood from an infected person, the cycle is continued. In the stomach of the mosquito, a special type of sexual reproduction takes place, producing an active worm-like form of protozoa. They wriggle through the mosquito's stomach wall where worm-like lumps containing the protozoa form. They then divide in two to form thousands of slender offspring which move to the salivary glands of the mosquito and are injected into the wound when the infected mosquito bites a man. The parasites then invade the red blood cells, and the cycle is started again.

^x *Tourists visiting 'malaria' countries take tablets before, during and after their trip to prevent infection by this most serious disease.* (Shea, 1988: 131, from Heffernan and Learmonth, 1982a)

As far as genre evolution is concerned (cf. Cranny-Francis and Martin, 1993; Kress, 1985 [1989a]: 85–95, 1989b), what is at issue is the long term impact of expansions of this kind on taxonomizing reports and life-cycle explanations. Are these enhancements more than nonce adjustments—more than occasional contextually specific negotiations between genres and their environment? Does metastability lie in the direction of generic inertia and the effacement of expansion of this kind? Or is the environment of these texts such that adjustments of just these kinds will systematically recur? Does metastability lie in fact more in the direction of evolution and the synoptic incorporation of these manoeuvres as predictable multivariate stages in the experiential structure of the respective genres? Whatever the answer to these questions, it is clear that metastability is driven by ideological tensions within a culture, and between cultures and their other than semiotic environments. The dynamic openness inherent in genre as system is fundamental to the resolution of these tensions—and this openness is in part enabled by the ideational expansion resources introduced above.

6. Text/clause resonance—a summary

In this section the analogies between clause and text structure introduced above will be summarized. In addition, some of the ways in which these strategies are distinguished graphologically in written texts will be reviewed.

Ideational analogies involve the logical resources of projection and expansion, and the experiential resources of rank (i.e., constituency hierarchy) and embedding. As for projection, with projected locutions, one text is quoted by another. The quoted material is typically formatted differently from the quoting text—in quotation marks if not too long, indented and placed in a separate paragraph if long, possibly using a different typeface, with specialized layout if the text is projected as a document and so on. The source of authored material will also be given, in one step, by means of footnotes, or in two steps, usually including name and date in the projected or projecting text and elaborating this information subsequently in lists of references or bibliographies. With projected ideas, the 'content' of the projecting text is reworked as an alternative form of semiosis—as a graph, figure, drawing, etc. These projections will themselves be elaborated by titles and numbers in order to clarify their intertextual dependence on the verbal semiosis projecting them. In books, the names of these projected meanings are often accumulated in lists of figures and tables for the volume as a whole.

Turning to expansion, a text is developed through elaboration, extension or enhancement. With extension, one text is extended through addition or alternation. Extension tends to be directly reflected in the organization of larger written texts into paragraphs, sections, chapters and so on. Sections and chapters will be elaborated with titles and headings, which are themselves accumulated in a table of contents. Enhancements, perhaps because of their more dependent status, tend not to be foregrounded by graphological conventions.

Experientially, texts may involve a number of ranks, including the possibility of embedding. The more consciousness and editing involved in text production, the more likely a text will be to involve a large number of ranks and multiple embedding. Experientially complex texts will thus tend to be written or written to be spoken rather than spoken (cf. Halliday, 1985b [1989]), or involve professional training as with curriculum genres (Christie, 1987, 1993; Gibbons, 1994; Sinclair and Coulthard, 1975). Graphologically, it would appear that part/whole structures are treated in the same way as part/part extensions. This makes sense, since in writing each part of a publication is given physical substance as parts of a whole. It is perhaps for this reason that linguists have tended to

model part-part text structures in constituency terms. Ideational strategies for developing text structures are summarized in Figure 11.

Interpersonally, texts may be developed through the amplification of mood, modalization, attitude and so on. Some texts make use of iconic formatting (e.g., size of font, bold face, outline, shadow, etc.) to highlight the relevant repetition. Any attendant semiosis (e.g., music, paralinguage, kinesics, dance, etc.) typically resonates with interpersonal crescendos or diminutos generated by the verbal text. An iconic representation of this amplification strategy is offered again here, by way of summary, in Figure 12.

Textually, texts organize themselves with respect to pulses of informational prominence. The most relevant aspect of graphology is the use of titles and headings to name sections of text or projected meanings (i.e., tables, figures, etc.). In addition, levels of periodic structure imply a

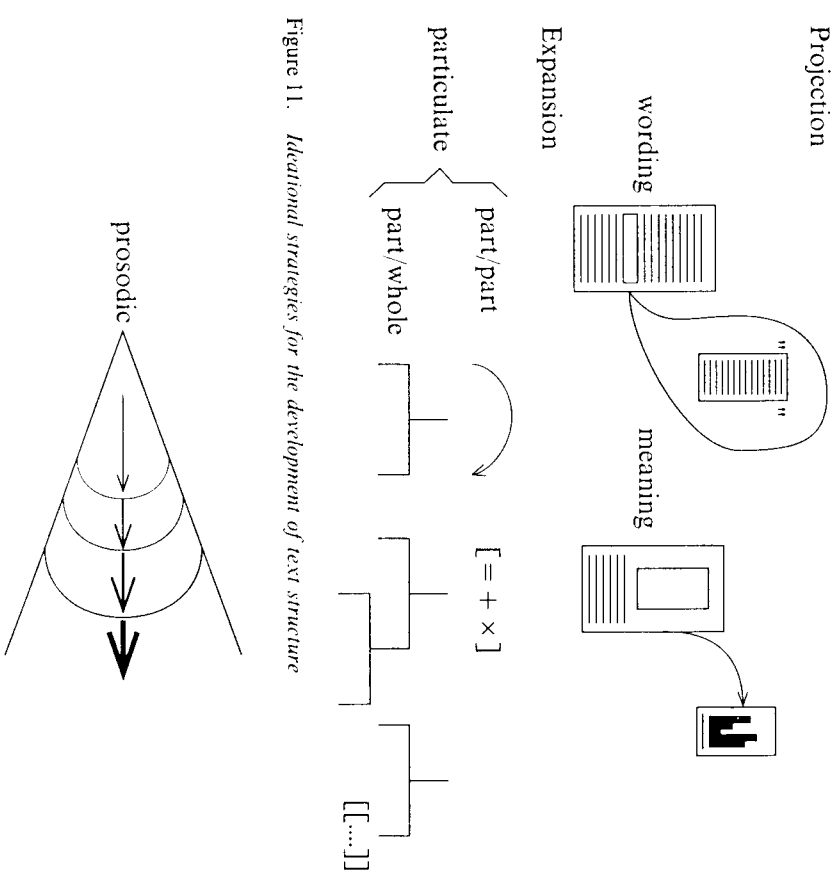


Figure 11. Ideational strategies for the development of text structure

Figure 12. Amplification as a resource for developing text structure

'culminative' form of realization, so that the beginning and end of each layer in the organization of a text is especially significant from the perspective of textual meaning. An iconic representation of this periodic strategy is offered in Figure 13.

As a final note, it is important to recognize that projected locutions and ideas are related to projecting texts through expansion as well as projection. The projected meanings in diagrams, for example, typically elaborate their projecting verbiage, reformulating verbiage as image. The simultaneity of these expansion and projection principles is outlined in Figure 14 (textual structure has been subsumed under elaboration in this

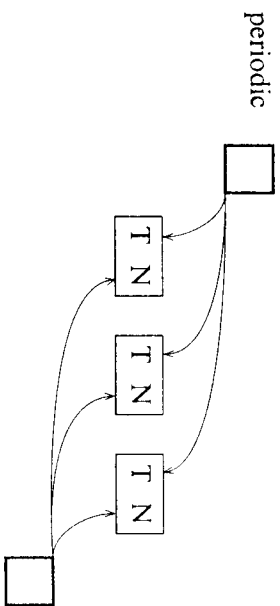


Figure 13. Prediction and consolidation as waves of texture

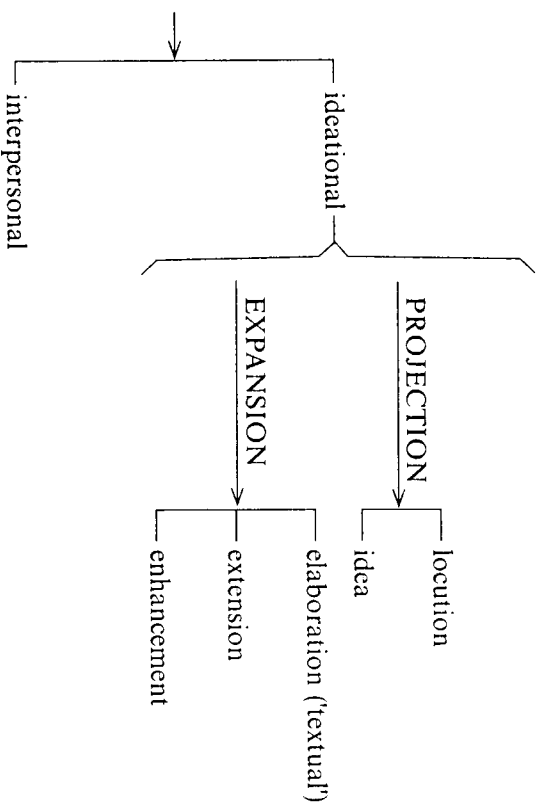


Figure 14. Expansion and projection as simultaneous ideational principles for developing text structure

summary) to focus attention on the fact that it involves a redeployment of an ideational resource to construct waves of prediction and summation).

If we formulate the various analogies between clause structure and text structure as a resource for text development, as in Figure 14, then it is clear that text is a semantic unit of indefinite elasticity—which property enables any text to adapt to its environment, compliantly fulfilling generic expectations or subverting them where renovation is motivated. This kind of elasticity of course raises questions about what kind of unit it is that is being classified when linguists design text typologies. Within systemic functional linguistics, the overwhelming tendency has been to design typologies for texts in which ideational, interpersonal and textual structures converge (e.g., Martin, 1985 [1989]; Halliday and Martin, 1993). The idealized text (1), for example, with which the paper began, is a canonical historical recount—ideationally it runs through the history of high seas whaling from its origins to the present; interpersonally it evaluates this history as 'a mining operation moving progressively with increasing efficiency to new species and new areas'; textually, it opens by predicting what will come and closes by summing up the news. Closure of this kind makes the text ideal for both analysis and classification: it functions like a clause, with ideational, interpersonal and textual structure working closely together.

Then, working against this closure, the text continues with a discussion of shore-based whaling in Canada. This paragraph is organized around space rather than time (where shore-based whaling took place); it is not evaluated; nor is it summed up. From the perspective of genre typology, its presence makes the much less canonical example of a historical recount. Given the context of the paper as a whole however, it is easy to see why the paragraph is there. The paper in question is being read in Halifax, Nova Scotia, on the east coast of Canada where shore-based fishing, whaling and sealing operations for native and non-native peoples have been an integral feature of the economy and culture for hundreds of years—an economy and culture which has recently been devastated by 'overseas' exploitation and 'inland' environmentalist pressures. Text (1) addresses these concerns by granting shore-based whaling a distinct, regionally centered history—for which a different kind of management is perhaps appropriate. The genre adjusts to its environment, just as the taxonomic report discussed in section 5 above recontextualized its classification of whales with a nod in the direction of the recreational use of whaling resources (whale and bird watching).

This is not to argue against the possibility of productive work on genre typology. In all semiotic systems, innovation must be read against iner-

tia—new has meaning with respect to what has gone before. In this light, text typology can be interpreted as providing an idealized record of the conventionalized configurations of meaning immanent in a culture. This needs to be balanced, however, with studies of the generic resources which enable texts to make new meanings. The resources summarized in this paper provide a grammatical perspective on this text potential, and a partial explanation of why texts don't always fit a norm.

Notes

1. This glossing was presented by Christian Mathiessen during lectures on systemic grammar at the Finnish Summer School of Linguistics at the University of Jyväskylä in 1989.
2. The particulate/prosodic/periodic terminology is first introduced in Martin, 1991a.
3. This final section of the paper is treated as an enhancement, because it draws conclusions from the preceding sections, rather than simply adding on more background information.
4. The variation is referred to in Halliday, 1985a [1994] as identification, and involves redeploying an elaborating ideational resource for textual purposes—just as texts make use of elaboration to construct waves of prediction and summation (as in text [1]).
5. Martin (e.g., 1984, 1985 [1989], 1986, 1992b) has generally referred to generic staging of this kind as 'schematic structure'; Hasan (e.g., 1985) uses the term 'text structure' for the same phenomenon.
6. I am indebted to Christian Mathiessen, who is in turn indebted to Rughaiya Hasan, for the schematic structure of this solicitation genre.
7. The analysis has been extended here to include the text's third paragraph on shore-based whaling.
8. For discussion of the ideological implications of this kind of field shifting consolidation, see Martin, 1986.

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