

Thematic Analysis : Systems, Structures, and Strategies

JAY L. LEMKE *City University of New York*

1. WHY THEMATIC ANALYSIS ?

Every text or occasion of discourse makes its social meanings against the background of other texts and discourses circulating in a community. This is the principle I have called general intertextuality (Lemke 1982). We make meanings from text to text through the relations of their discourse structures and rhetorical devices, through the conventional social relations of the actions and events constituted in part by the texts, and through the systems of relations of the thematic-ideational fields of the 'contents' of the texts.

A full analysis of the meanings we make with a particular text must account for meanings made in all these ways : Who is doing what to whom with this text ? and *how* ? What other texts and doings stand in what relevant relations for the meanings made and acts performed with this text ? What social systems are maintained or altered by what relations among the sets of texts to which we may assign this one ? What social interests and their conflicting discourses are being served or contested in this text and through its intertextual relations ? How does the text contribute to the maintenance and change of the linguistic system and the patterns of use of that system in the community ? What systems of thematic relations are being explicitly built by this text ? Which such systems of thematic meaning relations does this text share in part with which other texts ? And of these intertextual thematic ties which are how strongly foregrounded by what features of the text and its situational context ? How does this text integrate which thematic systems and social discourse types of the community ? And how does it instantiate these in ways similar to and distinct from other texts ?

In most of what follows I will focus on the last three questions, dealing with thematic systems and thematic intertextual meaning. Thematic meaning does not lie 'in' texts ; it is made by us through and with texts as part of social meaning-making practices that construct and contest the wider patterns of our changing social life. I wish to concentrate on thematic analysis here only to make available a tool which I hope can contribute to analyzing social conflict as it speaks through the texts of a community, and with that to more effective construction of discourses that will

expand rather than constrict the range of human social possibilities. How is this possible?

2. A SHALLOW ARCHEOLOGY

When I first began to analyze the discourse of science teaching (Lemke 1983), I noticed how fragmentary most presentations of the science thematic content were. Spoken discourse, especially dialogue, cumulates and builds up systems of thematic meaning by partial repetitions and small variations. Because of the fragmentary character of these texts I noticed *what* it was that was being cumulated and how the cumulative patterns were needed for the interpretations of each fragment's thematic meanings.

In instructional discourse, or whenever we first encounter a new system of meanings, we must relate the discourse of one text or occasion to that of another in order to make sense of either. In scientific text, moreover, there are highly conventionalized, and therefore quite easily recognizable, systems of meaning relationships among terms and concepts. The relations among *light, heat, temperature, energy, absorption, reflection, and radiation* form such an (open) system of thematic meaning relations in physics, which could be reconstructed from any of thousands of texts or text-fragments, all of which share what I will call a common *thematic system*. We build up such a system piecemeal over many texts or discourses by means of what I will call the *thematic development strategies* available in the discourse practices of a community to construct syntagmatic *structures* across stretches of text, and even between texts, which realize the operation of these strategies and instantiate particular thematic systems of meaning relations.

Could such notions usefully apply to written as well as spoken, non-dialogue texts, to texts without the highly conventionalized thematic systems of scientific discourse? To see, I analyzed some poems of Wallace Stevens and Martin Earl that rely on semantic novelty (text-specific meaning relations), rather than on conventionalized relations. For the poems it was necessary to represent their text-specific thematic relations *before* going on to look at the more general thematic systems they shared with other texts. Scientific thematic systems are so uniform from text to text that this first step had not been formalized for them, but I now saw the value for all textual analysis of a distinction between the *text thematic system* (TTS), specific to *a* text, and the *intertextual thematic systems* (ITSs) it shares with some set of other texts.

Study of semantic novelty in the poems led me to abandon the classical semantic model of the lexicon, which assigns definite semantic features to isolated lexemes and assumes that meanings of larger units are built up from these in a relatively context-independent way. I found it more useful to assume that words do not have definite meanings of their own; rather, the meaning of a word is only approximately invariant in relation to its semantic valences to (usually a small set of) other words *in a specific set of texts*. That set may form a register (Halliday 1964, Lemke 1982 and citations on register therein), or have some narrower relation to the set of social contexts in which its texts regularly occur. What may be invariant over almost all texts are the abstract, *taxonomic* relations of words *as lexical items* (not as *fully*

semantic items). Thus *warm/cold* may be a *lexical* contrast-pair that are always in *some* kind of semantic contrast (i.e. taxonomic antonymy), but different thematic systems, and their texts, map or impose on this pair quite different semantic contents and semantic relationships, as in 'a warm/cold day' vs. 'a warm/cold look'. What logicians wish to isolate as the exceptionality of 'metaphor' is the normal semantic mode of language use, the concrete operation of the principle that all meaning is context-dependent.

With this broadened perspective I could now subsume the classical notions of *semantic fields* (Lyons 1977) and taxonomic lexical semantics (as in Lyons 1977 and as used in Hasan 1980, 1981) together with the newer notions of text-specific and intertextual thematic systems onto a single cline. Thematic systems of meaning relations among abstract items realizable by lexemes (and by more complex expressions) may be valid for a single text (TTS), a set of thematically related texts (ITS), a still wider set of texts (the domain of a semantic field), up to the widest possible set which preserves the lexical taxonomic relations (lexical taxonomic system), which in some cases may include almost all texts of the language. In practice, I will incorporate these last two notions into that of the ITS.

By recognizing that lexical taxonomic semantic relations are only part of the resources for making thematic meaning relations in a text or on an intertextual set, it becomes possible to represent the thematic system of *a* text, and that of a set of texts *in comparable forms*. This is done by adding to the lexical-taxonomic relations semantically specific to a text or set of texts the system of *ideational-grammatical relations* identified by Halliday (1983: Chaps. 5, 6, 7). Far from being a bizarre addition to the relations of lexical semantics, what is being taken into account in this way is simply another sort of semantic relation *typical* of a set of texts. On the cline from text-specific to intertextual thematics, what in one clause of one text is merely *its* assignment of, say, agent to process, becomes, across an intertextual set a *typical* assignment of the same, or a taxonomically related agent to the same or a related process. The abstract thematic items so related acquire a semantic tie like that between synonyms or co-hyponyms even when they occur *without* a grammatical relation.

This view, expanded later, rests on the assumption that natural languages as such have only a coarse semantics, deeply buried in those functional resources of their lexicogrammar which are invariant over almost all texts of the language. The rest of social meaning lies in the thematic systems communities construct, maintain, contest, and alter by their *patterns of social use* of the language system's resources.

The same methods for analyzing thematic systems in classroom science dialogue and modern poetry which I will now describe have also proved applicable in preliminary study of transcripts of interviews with people said to be schizophrenic (Rochester and Martin 1979), bureaucratic memoranda (Hardaker 1982), children's writing, a Hemingway short story, a few newspaper stories and editorials, magazine and television advertisements, and most interestingly, texts of social conflict between protesting students and conservative faculty, and between social groups in Northern Ireland.

3. THEMATIC SYSTEMS

A thematic system is our representation of the salient meaning relationships we construct in common for two or usually an indefinite number of texts (ITS). It may also be a comparable representation (the TTS) of thematic relations in one text. These systems of meaning relations are essentially non-linear. They may be represented by a multidimensional network (but *not* of the forward-branching sort usual in Systemic linguistics), displayed in a two-dimensional diagram. The nonlinearity poses important questions concerning how the linear structures of linguistic forms represent essentially non-linear thematic relations. The network representation consists of nodes (thematic items) and connections among them (thematic relations). In the most abstract representation, the nodes are labeled by the classes (sets of paradigmatic alternatives) of typical processes and their typical participants, common to the texts, or actually occurring ones in *a* text (TTS). The connections are labeled by the lexical-taxonomic or ideational-grammatical semantic relations between the nodes, as *typically* constructed by texts of the set.

A node may have several connections, and two nodes may have more than one connection between them. Lines of connection may cross, indicating that the network is of more than the two dimensions of the diagram. It is common for nodes to be connected in closed loops. A node may itself be expanded as a sub-network in a more delicate description. In the TTS it is useful to show whether a line or node appears in the text or is to be inferred from some ITS. Examples will be given later of these properties and their functions.

The lexical taxonomic relations used by Hasan (1980, 1981) are: synonymy, antonymy, hyponymy and co-hyponymy, meronymy and co-meronymy. These are used in cohesion analysis to form lexical items into *chains*, and one then specifies the typical (in *a* text, these are just the *repeated*) grammatical relationships between chains. In such analysis it may be necessary to determine from textual or intertextual evidence *whether* two items are *locally* synonymous or not. The same two items, in the same text, may be used equivalently in some places and contrastively in others. The lexical taxonomic relations are *available* as a semantic resource, but thematic analysis looks at how they are actually used. If two terms typically contrast, or are typically co-hyponymous in some set of texts, then that is a feature of the ITS and not otherwise.

The ideational-grammatical relations are primarily those of Processes and Participants at clause rank; of Numerals, Deictics, Epithets, Classifiers, and Things for nominal groups; and of the logical relations (Halliday's univariate relations) of the clause-complex and of nominal and verbal groups as word-complexes. All these relations enter the thematic system in two ways, which are distinct for the TTS but not so for the ITS. In the TTS, for *a* text, a grammatical semantic relation, such as that between *chimney* and *smoke* in 'the smoking chimneys' or 'smoke rose from the chimney', may be made by a grammatical (multivariate) structure *or* it may be made without an explicit structural form (e.g. when *chimney* and *smoke* are in separate

clauses) because for texts of this thematic system (or register, or genre, or in this situational or cultural context) it is *typical* that there be this semantic relation between the items. There is then, in the sense of cohesion analysis, a cohesive thematic tie between the items, just as there is between typically synonymous or typically co-hyponymous ones, providing another example of the *covariate* structural relations proposed in Lemke (1982). In the ITS, of course, where *all* relations are based on what is typical, the distinction is unnecessary.

Many instances of what has been called a 'collocational' cohesive relation (Halliday and Hasan 1976, Hasan 1981) are readily construed as intertextual thematic relations of the ideational-grammatical type. We can thus give collocational relations an (*intertextually* defined) *grammatical* rather than merely statistical basis and constrain their otherwise unlimited associativity (a problem for cohesion analysis described in Hasan 1981) by the ITS.

While these two classes of thematic relations, the lexical-taxonomic and the ideational-grammatical, account for most of the thematic ties in a text, there are several other sorts which must be omitted in a brief presentation. They include those based on interpersonal-grammatical semantic relations, actional relations, rhetorical relations, discourse structure relations, and most importantly relations in the *system of heteroglossia* of the discourse community (Bakhtin 1975). This last comprises the relations among discourse varieties that instantiate the conflict of different social interests. Every text must situate itself in this system, reflect an interest and a stance, a particular way of constructing the world distinguishable from and usually in conflict with other worldviews-in-discourse. I plan to address these issues in a separate paper (Lemke, forthcoming).

4. THEMATIC DEVELOPMENT STRATEGIES

Since I will be using these terms further, let me recall from earlier work (Lemke 1982) that *multivariate* relations in a text are syntagmatic relations that exist by virtue of the functionally differentiated role-relations of elements in a grammatical or discourse *structure* (e.g. Actor-Process-Goal, or Cause-Consequence): while *covariate* relations obtain between elements on the syntagmatic axis, whether or not structurally related in the above sense, where the elements all belong to some common formal system, class, or category (e.g. lexical cohesive ties, or formal parallelism relations).

In a complex discourse community there is probably a *potential* covariate thematic tie between *any* two text-fragments, and often very many. Of these potential ties, any which are actually construed by members of the community count as *weak* ties, even if they be construed only jokingly, or in deliberate disregard of context, or are regarded as fanciful. If a tie *can* be construed, does make some sense in the community, then it is at least a *weak tie*. But such ties are merely the raw material of an analysis. We seek to know which of these ties (tie types) are *foregrounded* for readers, which textual features contribute to the foregrounding, and how, and whether some are more strongly foregrounded than others. There is thus a cline from

weak ties to strong ones. The principal task of strategic analysis is to identify which ties are strengthened, to what degree, and how.

The basic thesis of my own analysis is that strengthening is accomplished, though by very many specific strategies, principally through the interplay of covariate and multivariate structural relations (semantically interpreted) at different hierarchical levels and belonging to different systems of meaning relations (Lemke, 1982). The complementarity of multivariate and covariate relations recalls Hasan's (1980) observation that textual cohesion depends jointly on grammatical (multivariate) and lexical (covariate) cohesive devices.

How does a text instantiate or build up a thematic system? More precisely, what features of texts do we rely on as readers in doing so, or build into our texts as writers? Several items may be construable as standing in a particular multivariate relation in the grammatical system (e.g. Actor-Material Process-Goal), especially where this relation is a typical one for some ITS expectable in the context. Several such multivariately construed relations may be in turn construable as parts in a discourse-level multivariate whole (e.g. Question-Answer-Evaluation). But we will still not have a cohesive-seeming text if we do not simultaneously construe some covariate relations, of which the most elementary is literal repetition. A covariate relation essentially indicates that it is possible to assign the items so tied to the same category, or to two categories with some regular systematic relation to each other. Strong, or foregrounded covariate relations are those that recur or are supported by multivariate relations, or by other covariate relations (as when two items have more than one covariate tying relation, or the same tying relation is repeated between different pairs). Repetitions usually occur with some variation of local synonymy or grammatical metaphor (Halliday 1983 : Chap. 10) or of substitution or ellipsis, or of expansion or condensation. There is often repetition of structural pattern rather than of a mentioned item, as in formal parallelism.

More complex foregrounding strategies rely on *distributional* principles : not all features of type A co-occur with equal frequency with all features of type B. A powerful strategy of this type is a nonuniform distribution of thematic relations over multivariate structures. For example, in classroom dialogue one often finds that technical themes of the lesson are carried by relational process clauses, while themes of school activity are realized by material and mental process clauses (Lemke 1983). This foregrounds the thematic separation of these two realms, and subtly distorts the semantics of the themes with that of the typical uses of the clause types (i.e. dissociates technical assertions from overt human activities).

5. DOING THEMATIC ANALYSIS OF A TEXT

Let us begin with a short text :

- o *The load of sugar-cane* (1923)*
- 1 The going of the glade-boat
- 2 Is like water flowing ;

* Printed with the kind permission of Alfred A. Knopf, Inc.

- 3 Like water flowing
- 4 Through the green saw-grass,
- 5 Under the rainbows ;

- 6 Under the rainbows
- 7 That are like birds
- 8 Turning, bedizened,

- 9 While the wind whistles
- 10 As kildeer do,

- 11 When they rise
- 12 At the red turban
- 13 Of the boatman.

WALLACE STEVENS

Grammatically, line 1 seems to present us with two Deictic-Thing nominal group structures joined by the all-purpose two-term relator 'of'. But we could also take *glade-boat* as a complex item, with structure Classifier-Thing, especially as this pattern is foregrounded by its recurrence, at least weakly, in *sugar-cane*, *saw-grass*, *boatman*, *rainbows*, and maybe *kildeer*. The whole of line 1 might then be assimilable to the pattern Deictic-Classifier-Thing, if we took 'of the glade-boat' to be semantically a Classifier of 'the going'. There is also, however, a semantic covariate tie between *going* and *glade-boat*, for typically BOATS GO. That is, in a large class of texts to which this one likely belongs, when BOATS are in the role of Actor, the most typically associated Processes are those of motion : GO, SAIL, STEAM, SINK, etc. They are also typically MOTION ON/IN WATER. Thus there is a weak covariate tie of the ideational-grammatical type between *going* and *glade-boat*. It is this that lets us construe 'of' here as standing for no metaphoric POSSESSION, but simply as a marker of an embedded Classifier conflated with a nominalization whose more grammatically typical (Halliday's *congruent* realization) form would be : 'The glade-boat is going ...'.

Lines 1 and 2 form a relational process clause. 'Is like' is another two-term relator, and 'water flowing' suddenly strengthens a number of thematic system relations that had been only weakly foregrounded. Its multivariate form, though non-finite, is again a nominalization of a typical Actor-Process thematic relation : WATER FLOWS. But, semantically, how 'like' are these two Actor-Process relations ? Halliday has pointed out the ambivalence in the transitivity systems of English between the semantics of Actor-Process and that of Medium-Process relations (the latter more like the semantics of ergativity in other languages, cf. Halliday 1983 : Chap. 5). WATER FLOWS exemplifies the Medium-Process relation, while BOATS GO is not as easily construed other than as Actor-Process. This dissimilarity makes the explicit 'is like' a non-trivial simile, while the nominalizations background the dissimilarity and

reinforce the explicit simile. But WATER also has its typical grammatical-semantic relation to BOAT and GO, thus strengthening the relevance of the thematic system by which *going* and *glade-boat* have the covariate ties that helped us construe the 'of' relation in line 1 semantically. The construction of simile between Medium-Process and Actor-Process terms will be repeated in lines 9 and 10. How shall we represent the thematic relations in the text so far ?

1. We will ignore the deictic elements, or absorb them in their nominal groups, since they do not form contrast relations (e.g. 'this' vs. 'that') or have other ties that will need to be represented in the diagram. The cohesive functions of deictics enable us to identify two mentions as thematically the same item, or different items.
2. We will ignore the nominalizations. This is a step toward intertextual abstraction that allows us to show the intertextual relations in a given text. Cothematic texts differ in how they express the same thematic relations, e.g. by different grammatical metaphors. A note of the nominalization should be made for further analysis of foregrounding patterns and for ultimate comparison with other cothematic or heteroglossically opposed texts. Much of the uniqueness of a text is identifiable by saying what choices have been made in that text in realizing the abstract thematic system.
3. We will ignore ordering, which is a feature of the linearization into text of a thematic system. Thus the choice here of 'water flowing' vs. 'flowing water' contributes to the chiasmatic pattern and phonological prosodics of the text, but not to the thematic system.

Figure 1 shows a possible TTS diagram. In this diagram, forked lines include the whole relational unit to which the fork points. Solid lines indicate explicit multivariate relations, broken lines show covariate relations of two kinds : the lexical taxonomic relation of co-hyponymy, and the relation glossed in angle brackets of an adduced ITS with typical forms BOAT GOES ON WATER. That ITS is shown alongside. Solid lines are labeled by the ideational-grammatical semantic relation represented as shown in the key.

At this level of abstraction, our TTS diagram is already potentially intertextual, representing equally :

- A. Glade-boats go like water flows
- B. Flowing water is similar to glade-boats' going
- C. A glade-boat goes just like the flowing water
- D. Even like unto the flowing of waters is the glade-boat's going
- E. Go glade-boat ! Flow water ! It's all the same.
- F. How does a glade-boat go ? Like the water flows.

The repetition of 'Like water flowing' in line 3 adds nothing new to the diagram. Lines 4 and 5 add two circumstantial adjuncts of location, with parallel structures whose semantic parallism is strengthened, not just by the literal repetition of line 6, but by the later line 12, in all of which a Location Preposition has as its range a nominal group with deictic *the*, epithet or classifier (undetermined outside some wider ITS) realizing a color meaning, and as Thing, a visually prominent object.

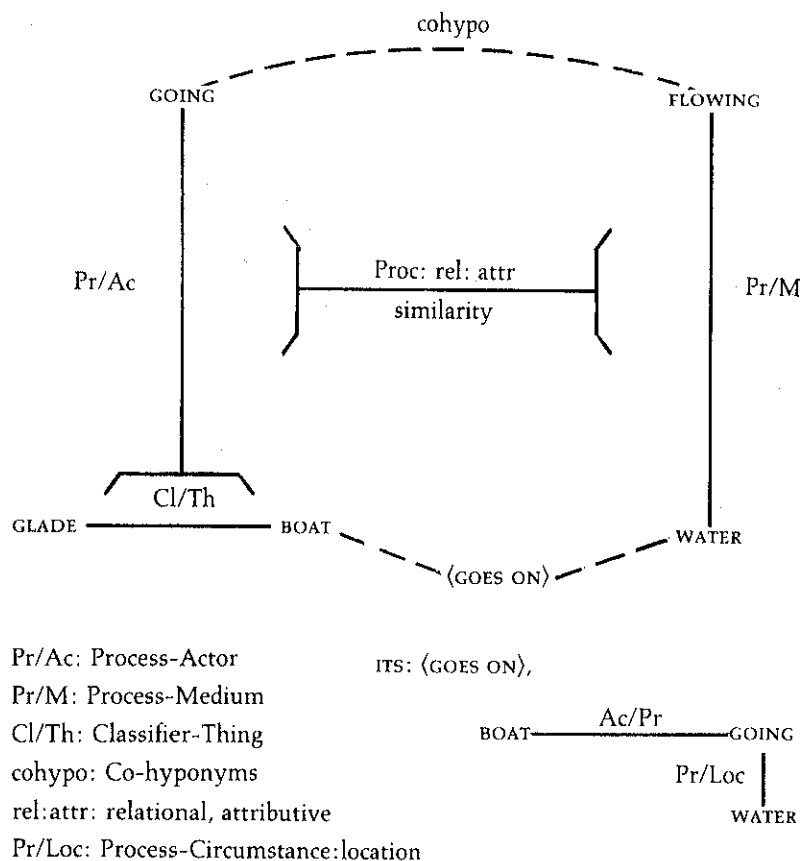


FIGURE 1

Rainbows conflates the color attribute and the Thing, and has thematic ties to *green* and *red*. We will return to the visual prominence of *turban* below.

Green saw-grass has a covariate tie to *GLADE* via the typical *GRASSY GLADE* and *GREEN GLADE* (Epithet-Thing, in clauses Attribute-Carrier), and one could even construe a lexical taxonomic meronymy between *GRASS* and *GLADE*. These tie stanza 2 back to stanza 1. To make a combined diagram for the stanzas thus far, we identify the nodes that occur in both. We can also add in other weak covariate ties, e.g. *WATER* and *RAINBOWS* are weakly co-thematic in an ITS where typically ‘Rainbows are made of tiny water-droplets’, or more widely through the indirect ITS relations of *WATER* to *RAIN*, *RAIN* to *RAINBOWS*. In a genre of Nature Scenes, *FLOWING WATER* and *RAINBOWS* might join in a specialized ITS with *GREEN SAW-GRASS* and the later *WIND* and *BIRDS* in a consistent typical imagery. *Water* and *rainbows* are neither simply co-hyponyms nor collocates ; their collocation is specific to the typical semantics of certain kinds of texts that instance a particular common thematic system of the community.

Our diagram thus far preserves an ordering of the text : read left to right, it gives line 1/line 2/ lines 3 and 4. This is not a failure of our diagram to abstract from the linear ordering of the text ; it is an indication that the text's linearization strategy is

While in line 9 establishes a paratactic (symmetric, non-dependency) relationship, not unlike that of *like*, but in respect of simultaneous action rather than similar manner. Its two arguments might be taken to be the whole preceding and the whole following text, making it the formal center pivot of the linear text structure, while BIRDS, we shall see, is the center pivot of the thematics.

Wind whistles recalls the semantics of Medium-Process, again played off against that of Actor-Process when a second Mood Subject, this time the Actor *kildeer* (a hyponym of *birds*), is supplied through the substitute *do*, for WHISTLE. The Medium-Process parallelism ties WIND WHISTLES back to WATER FLOWS, strengthened by the co-hyponymy of WIND and WATER, and the ITS relation of WHISTLE to both, as itself the product of a FLOW of AIR or WIND. Lines 9–10 compress within themselves the whole pivoting thematic development of the first eight lines : from FLUID FLOWING to BIRD DOINGS. And what the birds will do in line 11 is *rise*, a co-hyponym of their *turning* in the lexicon of birdflight. Diagrammatically :

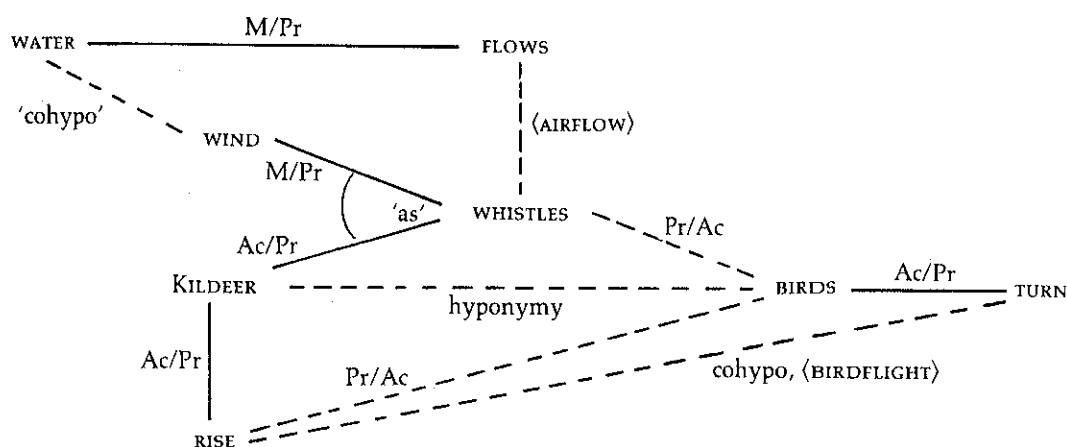
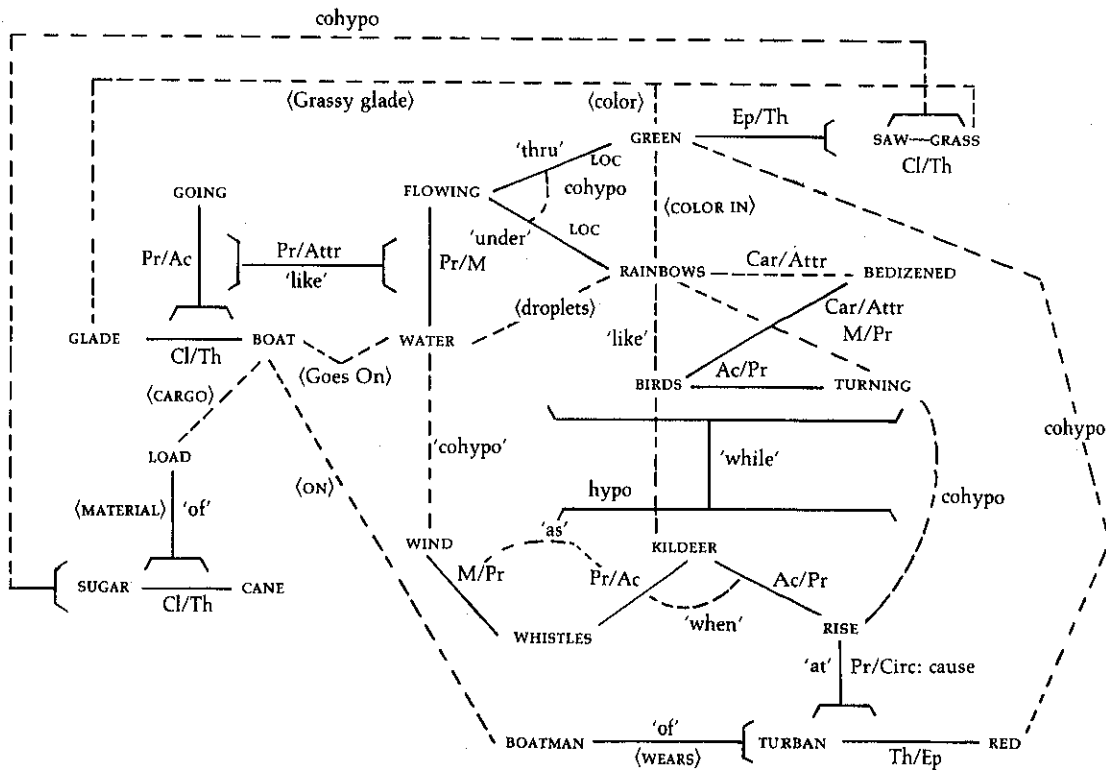


FIGURE 4

It is a frequent feature of Stevens' poetry that there will be a shift in implied point of view to the viewpoint of something that was first itself an object-in-view. In this text this occurs with a peripety turning on BIRDS, which are first a visually exciting object (*birds, turning, bedizened*), and then the implied viewers of a visually exciting object, *the red turban*, at the sight of which they rise up and which is located near the probable point from which they were themselves just seen (i.e. from the BOAT). the last line, in placing the turban on the head (an intertextual inference from a typical relation in an adduced ITS or TURBAN and PERSON) of the *boatman*, moreover achieves a final thematic pivoting which brings us back to the theme of BOAT in line 1 by way of the typical cothematic ties of *boatman* to *glade-boat*: BOATMEN ARE ON BOATS, or BOATMEN PILOT BOATS.

The effect of the poem's having come full circle, by way of multiple thematic pivotings and a reversal of point-of-view, depends on far more than the simple lexical repetition of *boat* from the first to last line ; it depends on the full system of thematic



Ties not shown:

WHISTLE/FLOWING, (AIRFLOW)

RED/RAINBOWS, (COLOR IN)

TURBAN/BEDIZENED, (EXOTIC SCENE)

BIRDS/RISE, Ac/Pr

Supplementary Key:

Ep/Th, Epithet-Thing

Pr/Goal, Process-Goal

Syns, locally near-synonymous

'Cohypo', functionally co-hyponyms
in a particular ITS

Car/Attr, Carrier-Attribute

Ran, Range of a Process

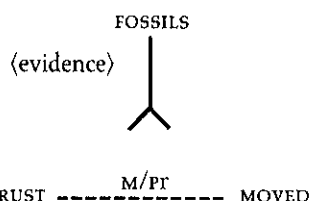
FIGURE 5

relations for the text, within which the linear word sequence of the poem traces a closed circuit path through a network of richly thematically interconnected elements. In displaying now that full network of the poem's TTS, we can add also the title, noting that its only ties to the Body, apart from the Title-Body relation itself, i.e. its only semantic support, arises jointly through the co-hyponymy of *sugar-cane* and *saw-grass*, and more definitely through the intertextual thematic relation of LOAD as CARGO to BOAT, the closure term of the text. These ties are in turn strengthened by the grammatical parallelism of title to first line (even to the hyphenated Classifier-Thing), and the participation of *sugar-cane* in a specialized ITS of Exotic Tropical Oriental Scenes (cf. red turbaned boatman, bedizened birds). In total we have our diagram as in Figure 5.

6. THEMATIC SYSTEMS FOR INSTRUCTIONAL DIALOGUES (see appendix A, p. 183)

We will now consider, in contrast with *Load of Sugar-Cane*, a 'whole text' of high thematic diversity for its short length, a set of fragments of science classroom discourse which are tightly co-thematic, repetitious rather than diverse, and conventional within their genre and register rather than innovative. They are fragments of dialogue recorded in the same secondary school science class in a large American city on two consecutive days. They are co-thematic in that their individual TTSs overlap to form a limited ITS that essentially exhausts their thematic content. They are sayings that build up a common system of thematic relations by repetition variation, specification, expansion and generalization. In their use of these strategies they are not unlike the poem we have just analyzed.

Fragment A is spoken by a teacher just after reviewing the definition of *fossil*. It begins with a metadiscursive cue that there is a thematic boundary in the linear development of the discourse. In terms of the system of thematic relations, what is happening is that the node FOSSIL is the only explicit thematic item in common between the preceding episode and the one from which our fragments come. This thematic pivoting is a common linearizing strategy familiar from the Stevens' poem. Fragment A continues by presenting the first thematic relations. We get the same system of relations twice in this fragment, once as a double embedded structure with *fossils* as Head within the metadiscourse frame, and then again as a Teacher Question (a typical move in the multivariate discourse structure of this genre; see Lemke 1983). Both mood and taxis as such are here seem to be thematically irrelevant, so long as they are not distributionally contrastive over the fragments. In particular, while the choice of hypotaxis vs. parataxis is usually thematically irrelevant, the logico-semantic choices *within* the TAXIS systems, say the 'e.g.' vs. the 'whereas' relation, do matter; (see Halliday 1983, Chap. 7). Note also the lexical variation within the repetition. It is only by examination of the whole intertextual set that we can know that USE-AS-EVIDENCE and HELP-KNOW are locally equivalent, however. That equivalence belongs to a more delicate discourse of the epistemology of science in this community that relates types of evidence to degrees of certitude of knowledge (Lemke, 1983 : Chap. 4). That they are likely to be equivalent here is expected from the strong parallelism between the metadiscourse clauses preceding their use, and the clauses that follow them, respectively. For Fragment 1 :



It is always risky to propose that this rough TTS be taken as showing what will be intertextually significant even about this one fragment; it is only the common pattern across fragments that narrows the range of possibilities.

Looking to Fragment B, we see that interactionally this is a Student Answer to the preceding Teacher Question. *Like* is here a colloquial introductory linking discourse particle whose exact semantic relation is context-dependent, though usually of the sort Halliday (1983; Chap. 7) calls elaborative expansion, and here it is specifically the exemplifying relation. FOSSILS recurs, classified by *fish* with contrastive stress (we will see that its alternative is LAND-ORGANISM), making already a specification/exemplification of FOSSILS. The EVIDENCE relation is realized here by 'if y'find ... , you know that ... ' with the semantics of the protasis like that of the German *sich befindet*, for we find in the fragments that it is not the process of FINDING that is foregrounded (as process it is sometimes omitted, its Actor usually indefinite), but the LOCATION-WHERE-FOUND that is never omitted and indeed enters into significant contrast relations, never the Process or its Actor. We will thus take PERSON-FIND-FOSSIL-AT-PLACE as an idiomatic, noncongruent realization of FOSSILS-ARE-IN-PLACE, where the relational process is Attributive: Circumstantial: Space location. This exemplifies the usual thematic indifference to grammatical metaphors, important as they may be to rhetorical effect or the ideological implications of the conflicting ways of saying of heteroglossically opposed varieties.

LOCATION here is realized by *on top of a mountain*, but its further analysis must await a contrasting fragment. The remainder of Fragment B can be identified in part with EARTH'S CRUST MOVED, here *land moved*. We suppose that the Medium in each case is locally equivalent to the other, and the voice selection strengthens our interpretation of the semantics as Medium-Process. The rest of this fragment, however, contains new thematics elements: WATER and a relation ONCE-LOCATED (*vs.* NOW-LOCATED) to the same LOCATION (*up there* equivalent to *on top of a mountain*). The locative idiom does not use FINDING this time at all. The thing that is so located is in the first instance FISH (FOSSILS), and in the second WATER. The common collocation of *fish/water*, as it appears here, is not simply a statistical affinity of surface forms; there is a specific meaning relation of these terms that is essential to the coherence of this text. It is not any of the usual lexical taxonomic ones, but the typical ideational-grammatical one: FISH-LIVE-IN-WATER, which follows the semantics of Actor (or Behavior)-Process-Circumstance: Location. The particular process cited as typical is almost irrelevant, for apart from *dying in air* (a direct antonymic contrast parallel), most of what fish do they do in water. Substituting for *water* any term that lacks a typical thematic relation to *fish* destroys the logic of Fragment B's argument. It is not enough for this text to be coherent that we recognize a collocational tie between *fish* and *water*; it is necessary to know, or suppose, just what their semantic relationship is.

Similarly, there is another intertextual contrast relation that must be supplied for us to construe a logical argument in the fragment. To imply the LAND MOVED, WATER and FISH must have been UP THERE *once*, and FISH FOSSILS *now*, but *not* WATER *now*. This last thematic relation is not a matter of any knowledge of ours 'of the world', for certainly mountaintops can be and some are now covered by water, but we must know that for our text-fragments' thematic system that was a past condition now changed to its opposite.

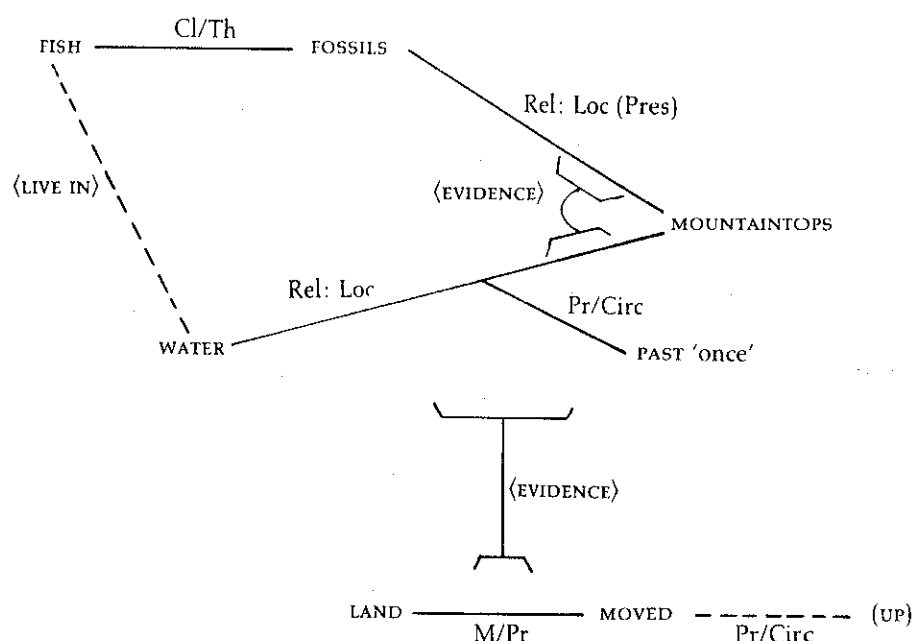


FIGURE 6

A diagram of these relations for Fragment B is shown in Figure 6. How to conflate it with that for Fragment A must wait until we can better see which features they share or do not share are relevant to the ITS of the fragments.

Interactionally, Fragment C contributes the positive Teacher Evaluation move *OK*, requests further answer by *and what else besides*, and restates the previous answer of Fragment B, with which it is contiguous in the text. No new thematics is introduced by the next fragment, but we can see the strategy of Generalization at work, replacing items by hyperonymous terms in (D).

Fragment E gives the Teacher Restatement of the highly generalized Student Answer (D). He restores *fossils* to the text, returns to the FINDING/LOCATION idiom, uses *environments* in the LOCATION slot, echoes *originally* and completes the *opposites* thematics of CHANGE with the remainder, foregrounding the contrast of different types of *environments*. We can now be clear that there are two types of environments (*marine/land*) and two thematic relations of FOSSILS to them: LOCATION-WHERE-FOUND and LOCATION-WHERE-ORIGINALLY-CAME-FROM. We need to know intertextually that the latter applies to the ORGANISMS, such as fish, that became fossilized.

It is in Fragment F that the teacher finally supplies the further answer to his question that he has wanted since (C). It returns to the metadiscursive frame of (A), uses the FINDING/LOCATION idiom twice, once to specify the ORIGINAL ENVIRONMENT, which is also realized as a classifier, and again to tell the LOCATION-WHERE-FOUND. The EVIDENCE relation is realized very obliquely as *OK, that's when ... happens* and the associated Conclusion as *subsidence*, the technical register hyponym of CRUST-MOVES. The NOW-LOCATION is *in deep oceans*, which is in parallel contrast with *at*

high elevations, on the tops of mountains, completing the close parallel with fragment (B).

Fragment G is parallel to (A). It is a written question to be copied in students' notes and essays a summary synthesis of the discussion. EVIDENCE is realized here by *help determine*, while CRUST-MOVED has become CRUST-CHANGE, classified as *minor*. Note that *move* and *change* may be co-hyponyms rather than hypernymic as they are in *this* set of texts.

Fragment H is a Student Answer, supposedly to the written question (G). We recognize the colloquial *like*, EVIDENCE as *if find ... , know ...*, FINDING/LOCATION idiom, and the CHANGE theme realized both by *once* and by *originally* with the past tense. There is a direct contrast to (B)'s *once there was water up there in once wasn't water there*, and the double use of LOCATION-ENVIRONMENT, *once* as NOW-LOCATION (*underneath the ocean, deep in it*) and again as ORIGINAL-ENVIRONMENT (*where there wasn't water*), with the CHANGE theme realized by the direct contrast of *wasn't water* with *ocean now*. Without the ITS, i.e. the intertextual relations with the other fragments, (H) is mainly incoherent.

In (J) the teacher adds some appositional glosses (*marine: fish, crab; high elevations: high mountains*). In (K), the official written Answer to the written Question (G), the FINDING-LOCATION combines *mountains* and *high elevations*, the EVIDENCE relation is realized by *suggests* and its conclusion uses the technical register antonym of *subsidence*, namely *uplifting*, both of them being now construed as hyponyms of *move* and *change* in these texts.

In (M) the teacher writes an official second part of the written Answer and comments on it. The classifier of FOSSILS here is *shallow-water*, now interpretable as a subclassification of *marine*. The FINDING-LOCATION is *at great ocean depths* in parallel contrast with *in mountains of high elevation*. The EVIDENCE relation is again *suggests that*. CHANGE is realized by *past* and CRUST-MOVE by the misspoken *subsistence* (sc. *subsidence*), where the Process is represented and the elided Medium easily supplied from the ITS.

Let us now attempt to diagram our treatment of these fragments as constructing a common intertextual thematic system as in Figure 7. In this diagram I have used angle brackets to indicate where a relation needs further intertextual explication. Thus the relation <-LOCATION, PAST> that certain types of fossils are not located *originally* in an environment actually means that the fossilized organisms do not/ did not occupy such a habitat. So also the EVIDENCE relation itself may be detailed from omitted portions of this text (see Lemke 1983: Chap. 4).

Reading the upper forms in each (paradigmatic) round bracket in the diagram gives us the thematics of fragments B, C, J, K: the lower forms give F, H, M. Fragments A, D, E, G are indifferent to these finer distinctions. Rereading D in terms of the diagram makes its actual coherence evident, and even illuminates fine points of the linearized text structures, such as the grammatical break in (H) 'and then when it - ' if compared to the available thematic options in the ITS shows that what would have typically followed was the term *subsided*, perhaps unavailable to this speaker, who then substitutes an expression of the generalized theme of CHANGE.

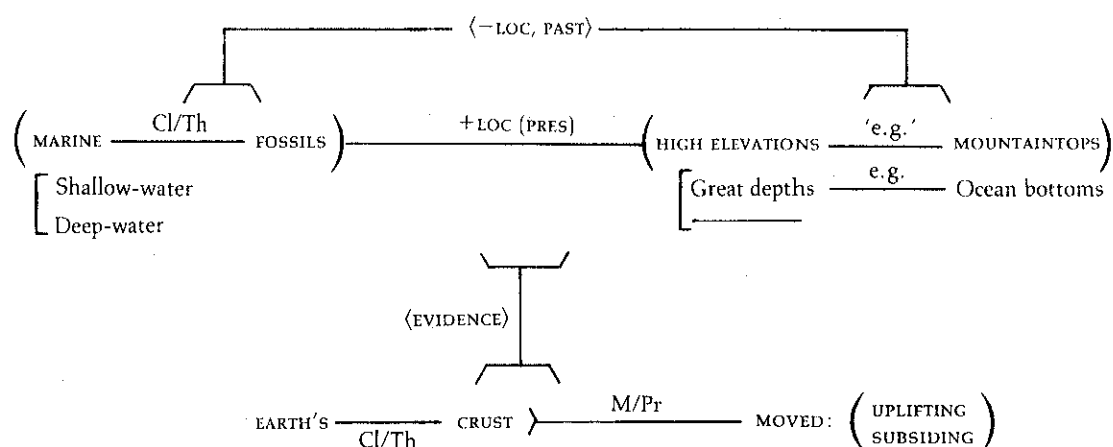


FIGURE 7

It may still seem that the relations analyzed here are text-internal rather than genuinely intertextual. I can at least show that the thematics are largely indifferent to this distinction, which is a multivariate-structural one, by citing a few fragments from the previous day's lesson. These are still co-thematic, and could be so even if the time separation were longer, the participants different, the setting changed. Read a few paragraphs from any geology book, and you will find essentially the same thematics if these items and their relations are treated at all.

In (2A) we get a realization of the upper part of our ITS diagram, explicating the NOT-LOCATED-ORIGINALLY relation as *they didn't belong there*. (2B) is paired with (2A) by the EVIDENCE relation, realized by expressions of interpretation or explanation as *and that's why*, or *what happened was*.

There is a similar relation, for the thematics of the lower contrast choices in our diagram, between (2C) and (2D). (2C) extends beyond our diagram, though basically it presents all but the bottom relation, asked for in its question. It explicates the NOT-LOCATED-ORIGINALLY relation by reference to the *organisms* and where they *lived* originally, and gives an anecdotal specification of FINDING in LOCATION that is part of *its* TTS, but not of the ITS it shares with the other fragments. Finally, (2D) makes explicit our contrast pair *uplift/subside*, gives the EVIDENCE relation in the form *that's why*, and gives the relations of CRUST-CHANGE to CRUST-MOVED.

The striking parallelisms and variation against a background of repetition in these texts stands out in part because of their highly conventionalized intertextual thematic relations. It remains to consider what happens in the thematic analysis of texts which are thematically and semantically innovative. After defining the theoretical issues at stake, we will return to poetry, where semantic novelty can find relatively full thematic contextualization in a short text.

7. THEMATIC INVENTION AND TEXTUAL COHERENCE

Commonplace texts, those we easily assign to a familiar register and discourse voice, whose structural patterns and thematic systems are easily recognized, and whose

intertextual affiliations make *this* text seem only a small variation on many others, are unproblematically coherent. But the resources of the language system are also available to us to make novel meanings, to alter existing intertextual thematic systems, or even to found new ones by writing their first texts. And the more radically we deviate from the thematically commonplace, the more problematic the coherence of our text.

I suspect that there is a hierarchy of lability in the resources of language and the meaning systems realizable through its use. Thematic systems seem relatively labile, but this is possible within the limits of coherence only because discourse structures (the language versions of activity structures) and especially grammatical structures are far less so. Most particularly, the semantic relations available to be expressed by grammatical structures (e.g. Actor-Process-Goal, Epithet-Classifier-Thing) in a community are highly stable and provide the fixed fulcrum against which we may lever changes in systems of thematic relations. The actual grammatical structures that construe these semantic relations may vary (cf. grammatical metaphors), but only slowly and within narrow (i.e. paucifunctional) limits. Multivariate structures that embrace larger stretches of discourse are more labile, but still much less so than systems of thematic relations. Thus it will be true that *local incoherence*, say at clause rank, may be overridden by *global* coherence strategies which construct new thematic systems in which the locally incoherent fragments can find a coherent place. The senseless fragment out of context makes sense when its context is restored; the arbitrary fragment becomes, if not grammatical, still sensible if only the right context can be built around it.

Global coherence may rely on large-scale textual patterning (e.g. stanzaic parallelisms) or not, but it always constructs an overall thematic system for the text. Where relations in this system are novel, that novelty may appear locally in the form of lexical-semantic (or less often, grammatical-semantic) anomalies. Global text-specific thematic systems may be very like intertextual thematic systems in that they accumulate thematic relations from paragraph to paragraph or stanza, as the latter do from text to text. They may also appropriate for themselves available intertextual systems of relations, using these or transforming them.

In the next section we will look at local thematic novelty (semantic anomalies) and global thematics in a text by Martin Earl. Here we will be able to treat further the problems of foregrounding. How do texts, or reading practices, foreground among all the possible thematic relations a text may globally construct or appropriate from available ITSs, *some* relations rather than others? Every text may be taken as the starting point for excursions that might eventually traverse every meaning relation and every text, discourse, and activity of a community. But there is a shared and contested sense among the readers of a community that some of the relations have *closer* connections, *greater* relevance, or are *more strongly* foregrounded than others. The strategies of foregrounding provide the global co-patternings through which we construe a text's thematic system, and it is by these same means that we can make new kinds of sense with one another.

8. THE POROUS MOMENTS (see appendix B p. 185)

Having read Earl's text once through, amidst the initial tumble of images we discern at least one clear organizing pattern: the first two lines are repeated verbatim three more times, and the poem closes with a variant of the theme. Though grammatically a single clause, each time it recurs it is split into two four-word sets on two lines. The closing line uses only the second four words without an occurrence of the first, strengthening their independence, as does the device of placing the first set's first occurrence as a Title line. The First Clause, let's call it, recurs at stanzaic structural boundaries in the text thereafter, one four-word set in each stanza. The final line is also set off from the stanza pattern, as the initial title line was, making these two also weakly paired. In all but the last stanza, the repeated First Clause introduces a discourse structure of Cause-Consequence, realized by clause-complexes, and even for those stanzas in the middle of the poem where the First Clause is not repeated, some other Cause clause occurs, again at the stanzaic boundary, and again split from its Consequence between successive stanzas. This high degree of large-scale multivariate global structural order provides a firm scaffolding on which the poet may construct his novel thematic relations. I will not deal here with phonological, prosodic, or other stanza-structure defining features in the text except insofar as necessary for the thematic analysis. A full analysis would require a separate paper.

Look first at the repeating First Clause's thematics. In no familiar thematic system is *porous* a typical epithet or classifier of *moments*. This is a lexical-semantic anomaly, a thematic innovation. The most widely used thematic relation involving *porous* is: SOLIDS-(ARE)-POROUS-TO-LIQUIDS. There is still no familiar system in which *moments* are hyponymous, say, to SOLIDS, to carry this Attribute. At one further remove, the ITS could give us: 'Liquids pass through porous solids' leaving us to imagine ourselves or something that could pass through porous moments. The clause grammar now proposes that *porous moments* be construed as in a Medium-Process relation to *spill*. The typical Medium for SPILL is LIQUID, so that now the thematics unstably oscillates between taking *moments* as a solid porous to liquid *vs.* itself a liquid that spills.

The clause finally provides a Circumstance that specifies the Range of the spilling, with *through* strengthening the thematics of PASS-THROUGH in the POROUS system, and *the night* finally giving us a familiar thematic partner of *moments*, from the system where typically NIGHT is a succession of MOMENTS of TIME. *Moments* has been wrenched from its usual thematic valences (by *porous*) only to be returned to them again (by *night*), by way of an unusual, but not unprecedented relation (*moments-spill*).

A text-thematic system, however it may be constructed piece-by-piece from local bits of the text, is, as we saw with the classroom dialogue fragments, still essentially a *global* view of the text because *which* features of each clause or group matter thematically is only determinable from their relations of contrast, repetition, parallelism, etc. to other parts of the text. We can look now globally across the text

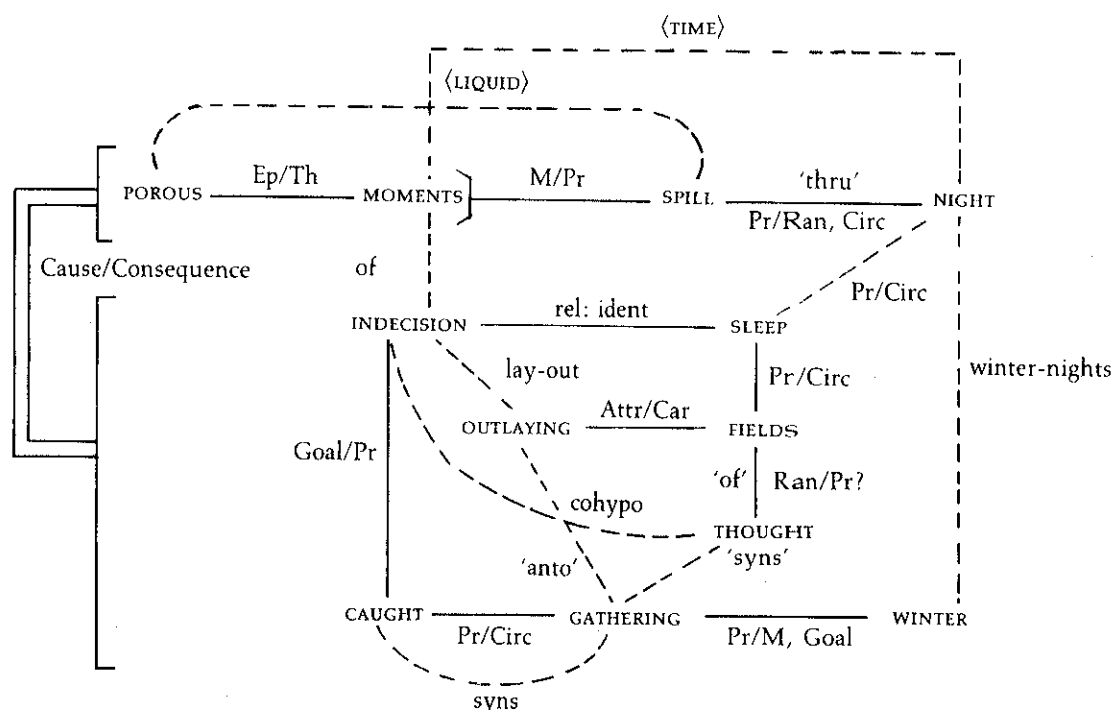
for clues as to the consistency of foregrounding in this text of the thematics of *porous moments*. We find that, apart from the literal repetitions of the First Clause itself, the LIQUID system appears briefly in an unforegrounded way at lines 18–19 ('saturated with the burning pitch of dreams'), but not otherwise until a point immediately before the final reappearance of the First Clause (lines 38–41). There *porous moments* and *bleeding holes* appear finally in consecutive lines. In the context of lines 38–39 for *bleeding holes*, PERSONS: *oddballs* get nailed up (ITS: CRUCIFIED). Typically, getting nailed up makes HOLES in them, and they bleed through these holes. But in this text, while LIQUID: blood does pass through these HOLES (cf. pores), the oddballs PLUG the holes, are nailed up in order to do so. Thus *bleeding holes*, by being shifted from the typical Part-Whole relation to *oddballs* (nail-holes in the oddballs), to the text-specific anomalous Goal-Actor relation (plugged-plugging: oddballs in the bleeding holes) both become available as a local equivalent of *porous moments*: OPENING-LIQUID-PASSES-THROUGH, and participates in a similar thematic oscillation to that of lines 1–2 (40–41): holes in the oddballs that LIQUID: blood passes through *vs.* oddballs in the holes, plugging them (i.e. so nothing passes through). What the oddballs keep from passing through the holes may also be what can pass through porous moments, *not* blood or LIQUID at all.

The LIQUID thematic system, realized by *river*, dominates the remainder of the text. We will return to it later.

In addition to global thematics, and the covariate and consistency of foregrounding relations, we expect multivariate relations to guide us to parts of the text especially relevant for working out the thematics of our First Clause. At it is Cause, we look next to its Consequence, first in stanza 1, lines 3–6.

Indecision has only a faintly possible tie to *moments* (cf. typical 'moments of decision'), and *caught* and *gather* perhaps an antonymic potential to *spill*, but *winter* has a widespread typical tie to *night* (as in winter-nights *vs.* summer-days), and that ITS centering on the focal NIGHT also connects with *sleep* in the elaboration of *indecision* (line 3). It is through *sleep* that ties are possible to *night*, *winter*, and *moments*. SLEEP is a Process whose typical Circumstance: time is NIGHT, but the text gives us a space location circumstance, or seems to: *in the outlying fields of thought*. Again there is thematic oscillation between *outlying/outlying fields* (that lie at a distance) and *fields of thought*, with the irregular *outlying* in a quasi-antonymous relation to *gathering*, itself lexically synonymous in many uses with *thought* and its antihyponym *indecision*. In its alternative sense, *gathering* is a typical Process in *fields*. These relations, some foregrounded by parallels later in the text, cut across the grammatical sense relations of the text but in the overall context of the poem help to increase the text's coherence. The system of NIGHT-SLEEP is strongly foregrounded in the poem; apart from the First Clause repeats, the next stanza repeats *sleep* and a sleep image (lines 12–13) and the one after tells of *morning*, *time*, and *dreams*.

In the oscillation between a night spent in outlying fields, where one gathers, and another sort of gathering/thought/indecision/laying out in its special night-form in sleep (namely *dreams*), we *begin* to get a coherent reading. Asleep in the distant fields we are caught surprised, threatened, perhaps by the first snow of a winter; asleep in



Ties not shown:

SPILL/CAUGHT, 'anto'

SPILL/GATHER, 'anto'

FIGURE 8

distant fields of thought we are likewise vulnerable to what in dreams spills through. In part this reading, like the thematics comes nonlinearly from the global thematics, i.e. from many readings of the text that draw on more than this stanza and which can never be presented in the form of a sequentially reasoned argument. But accept this reading as a hypothesis to be supported by what follows, and as the basis for a TTS diagram for the stanza.

We have looked so far at only one of the Consequences of the First Clause Cause. Looking ahead, the second is NOT-PURGED-OF-HUNGER; the third, SATURATED-WITH-BURNING-PITCH/NARROWLY-ESCAPED; and the last, though not structurally an obvious Consequence, CONFUSED/INFURIATED. And in all the first three, these dangers are associated with night, sleep, dreams, and what spills through their porous moments.

In the second Consequence, HUNGER (like INDECISION above) does not enter thematically in its usual semantic relations, but mainly by connection with sleep and dreams. The *hunger/craving* is not for food, but for *sleep* and the *breathless heart*. This last is again a semantic anomaly, sensible in the thematic system of SLEEP-DREAMS. Typically, HEARTS-BEAT/LUNGS-BREATHE. In sleep, we breathe less, the heart beats slower. In dreamless sleep, we breathe least, our hearts beat least. But there is yet another thematic oscillation in the Consequence. The ancestors both

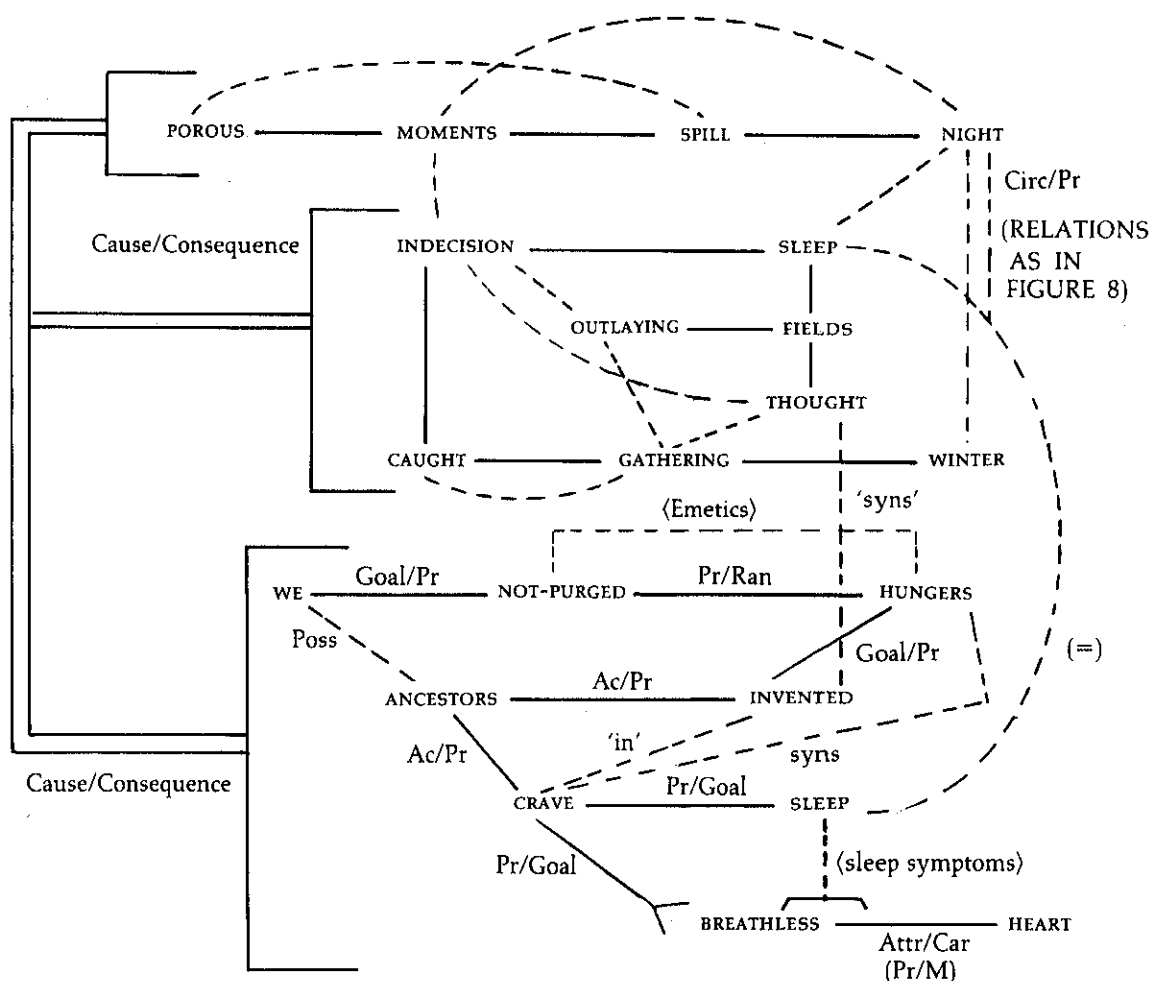


FIGURE 9

craved (perhaps dreamless) sleep and invented *hungers* in that craving. But despite the typical synonymy of *hunger* and *craving*, it is merely redundant that the hunger should be a hunger just for sleep. HUNGER here as a thematic element participates also in the system of CONSEQUENCES, which are text-specifically dangerous, undesirable (a major theme as we shall see) as in the idiomatic NAMELESS-HUNGERS, as well as allying itself to the craving/hunger to be free of dream danger.

I will not say much about the third Consequence, except to note that *morning* belongs with the thematics of *night*, *return* with *sleep*, *lost time* with SLEEP and with DREAMS, here explicit for the first and only time, when its dangers as well as its illumination (*burning pitch*), but mainly its dangers (*narrow escapes*) are again foregrounded.

Looking back now to the Cause, what there is in the NIGHT that can be a special *moment*, in the global thematics of the stanzas and the poem, is DREAMS, and it is these that both spill through the night and are the pores through which something dangerous comes to us. But DREAMS are not themselves the danger; rather what

comes through them. What this is is never explicit in the text, and cannot really be glossed because the whole poem creates a thematic place for IT, and IT is known only by that place in this text. The text globally constructs IT through IT's meaning relations in the TTS of the poem.

With line 20 we enter a new section of the text, no longer dominated by the repeated First Clause, and running to line 39, a second group of three stanzas.

Stanza 4 (lines 20–25) returns us to the thematic system of the OUTDOORS, of the *fields* and being *caught in the gathering of winter*, but here we are in Cause rather than consequence, and if there is a parallelism of thematic structure, *running from the weather* is another Cause, like what spills through the night, of our difficulty in relation to dreams, to IT. *Running* resumes the thematics of *narrow escapes*, escapes from IT, and because we try to escape from IT, our *weighted bodies* (intertextually, so heavy in dreams when we try and cannot run from IT) 'are pierced by the vowels of our name'.

This last semantic novelty is a relatively simple one, pivoting in two thematic relations into which PIERCE enters: pierce-the-body (as with the crucifixion nails, line 38) and piercing-sounds, here the *vowels* of our name (our true name being called?). There are two parallel Consequences in this stanza: our-bodies-pierced and our-fears-tethered; the line-final *name* and *soul* enhance this parallelism, with *souls* completing a typical pair with *bodies*. What we fear are the souls 'we can only sing by night', and these are, in the global text thematics, our souls-in-dreaming, which we fear, because we run from IT.

The next stanza's Cause lexically reverses from *running* to *lethargy*, but the general thematics is the same, because in lethargy we are an *other self* that *draws the curtains* on IT (cf. runs away, fears IT).

And IT here is most nearly explicit: *each new discovery* (cf. *invented*, stanza 1). The stanza 5 Consequence now mutates from simply the uncomfortableness of IT (the negative feature already implied in that on which we must draw the curtains) to the Alternative to running away: the poet (*I*) will breathe (cf. *breathless heart*, stanza 2) for us readers too. We get *lungs* to complete the paradigm of *breathless heart* renewed here, as *bundles of rags* develops the thematic system of *weighted bodies* (and more distantly of *curtains* and *hat*). *Lungs* enters not only the thematics of breathing, but that of singing and piercing vowels (stanza 4), and the associated Process (*to be filled*) reverberates across the text (*to hunger* and *purge*, *to laden*), most significantly to *porous* and *spill*, since the AIR that tills the lungs is a FLUID (cf. LIQUID) and lungs and the whole of our bodies breathe it through our pores. Such connections would be merely fanciful were they not part of a consistently foregrounded thematic system which dominates this particular text in the many ways we have already begun to see.

As the global text thematics becomes clearer to us, it is relatively easy to make sense of the sixth stanza now; it is almost commonplace. Again there is Cause as Problem, and Consequence as Alternative. If we aren't drawing the curtains, we're tugging our bodies/souls through the narrow windows of common sense. It's enough trouble to make most give up. But the Alternative *oddballs* who don't, who accept IT, get

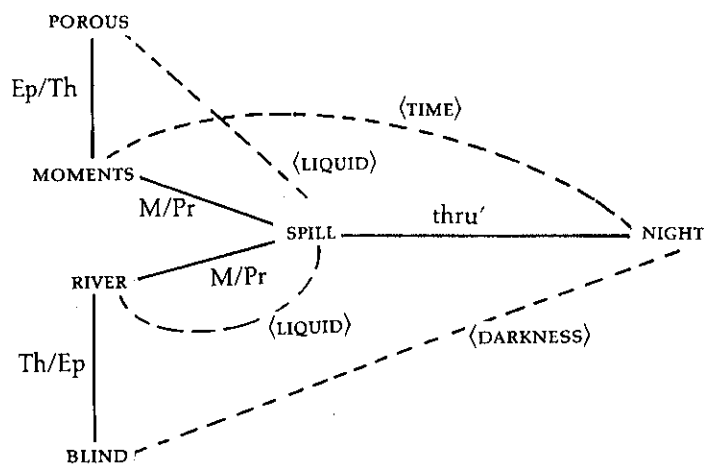


FIGURE 10

crucified, and we see now more plainly why: because they are themselves the bleeding holes, dangerous porous moments – resolving the dilemma of the oscillating thematics in these lines noted earlier. It is poets and seers who, accepting IT, become dangerous and endangered.

Now our First Clause returns, with a greatly amplified Cause, to tell us more of IT. LIQUID: *river* is now explicit, and IT never *sleeps* (paradoxically because it spills through to us in sleep). It is a *river with no skin* (no curtains on its side, no hat worn between IT and us/outside). It is a *blind river*, returning us as does the last line also to the thematics of DARKNESS: *night*.

But much more is happening in the important last stanza. The well-established pattern of the two-line First Clause throws *the blind river* into a forced parallelism with *the porous moments*, by way of their common relation to *spilling through the night*. We can make sense of this because the global thematics has identified LIQUID as one of the thematic elements that helps realize IT, and we notice by the time IT-SPILLS is realized in a semantically normal way by the typical LIQUID: *river-SPILLS* (as against the atypical *porous-moments SPILL*), ironically, the reading of *river* has been so conditioned by that thematics (*river* as IT) that we no longer construe IT semantically as LIQUID at all. Consider the full, many-leveled thematic chiasmus we have too simply labeled a parallelism (Figure 10).

The common Process: SPILL is linked thematically to its Media, in one case *via* the Thing: *river*, in the other *via* its Epithet: *porous*: while NIGHT links thematically to the second Thing: *moments* and the first Epithet: *blind*. The first two links are in a single thematic system (LIQUID), while the second two conjoin, *via* NIGHT, the thematics of DARKNESS and those of TIME. Looking just at the final stanza where these three systems are most strongly foregrounded, we also find the *river never sleeps* (LIQUID/DARKNESS) and *river's birth, age, life* (LIQUID/TIME).

It should not surprise us finally in this last stanza to again find the poem's characteristic thematic oscillation. The global thematics enables the text to control the instability it sets up once again in its own readings when *river*, elsewhere IT, is given attributes (lines 43–45) *confused, weighted*, with the possibilities of its *life abstracted*

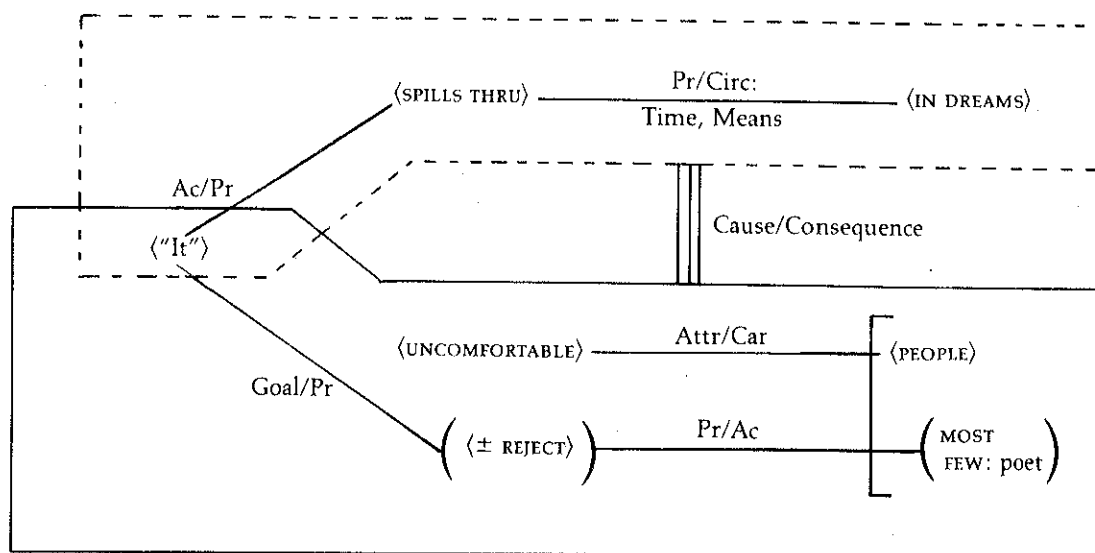


FIGURE 11

(taken away) by *age* that globally belong not to *IT*, but to us when we reject *IT*. After this analysis, Earl told me that these lines were largely borrowed from another poem, their fit in this one powerfully foregrounding the most iconic speaking of *IT*: *IT*'s destabilizing conventional meaning, locally and globally.

Obviously I have only sketched some features of thematic analysis provoked by an encounter with this rich text, and I will not try to give a general thematic diagram for the whole poem. But it may be useful, as a closing illustration of my use of the term global thematics to attempt a vastly oversimplified diagram of what I have taken to be the thematic core of the text (Figure 11).

9. AFTERWORD

My purpose here has not been to analyze fully any of these texts, but only to illustrate a specific method of thematic analysis and some of its points of contact with the notions of thematic development and foregrounding and some problems of rhetoric, poetics, stylistic and structural analysis. I hope this new tool, if used together with methods of structural, interactional, and critical macrosocial analysis, will strengthen our ability to dispel the sense of givenness and inevitability that cloaks thematic systems in our community which help through their pervasive texts to sustain oppressive interests, and will better arm us to contest them.

APPENDIX A:

FRAGMENTS OF CLASSROOM DISCOURSE

(A) I'd like to go on with what we were talking about. And we were talking about *fossils*, that are used as *evidence*, that the earth's crust has been moved. Now what did

we say about these fossils, how do they help us ... *know* that, uh, the earth's crust has been moved?

(B) Like, if y'find, *fish* fossils on top of a mountain, you know that once there was water ... up there, 'n the land *moved* or somethin'.

(C) OK, and what else, besides ... finding fossils at high elevations of marine, that were marine at one time?

(D) If you find the original *area*, with, um, things that belong on land, or vice versa, in water; if you find the opposite of what the environment is, you know, that it was, just the opposite.

(E) Alright, Sh! She *said*, that you might find, *fossils*, in environments where they originally, they – they definitely didn't come from, *those* environments.

(F) Remember I told you that we might find, *shallow* water fish, fish that are known to be found in shallow waters, very low waters ... we find these, *fossils* in deep oceans. OK that's when the subsistence-*subsidence* happens.

(G) Alright our question says, How can fossils help determine minor changes in the earth's crust.

(H) Like if you find, uh, fossils underneath the ocean, deep in it, you know that, that was once the crust, where there wasn't *water*, and then when it – there once wasn't water there, so that the way you determine that it wasn't, you know that it wasn't originally, the ocean that'd be there now.

(J) OK, we talked about finding *marine* fossils, remember we talked about finding, marine fossils, might have been fish, or crab or anything like that. We talked about finding these fossils, at high elevations, in high mountains, OK?

(K) It says, Marine fossils are found in mountains of high elevation, this suggests that the crust has been *uplifted*. Now if you remember, when we say *uplifted*, it means the earth is pushed up.

(M) We said that shallow water fossils are found at great ocean depths This suggests a past subsistence (sic). Now what do we mean by this? The *crust sank*. (...) We talked about uplifting here when the crust was uplifted, here the crust sank.

(2A) What would you say if I said that geologists found fossils at very, very – y'remember what *elevations* are – they're heights – at very, very high heights. These fossils are found in the top of very tall mountains, but there was one difference: they didn't *belong* there, they were *marine fossils*, they were *fish* fossils.

(2B) What happened was, more than likely is, the crust was pushed up. OK, and when we say the crust was pushed up, we say that it's uplifted. And that's why we find these marine fossils up on high mountaintops.

(2C) What if we found, shallow water fossils, these are organisms that lived in the shallow water, where it wasn't deep at all – very very low waters, you found these organisms, and you went deep sea diving, OK? and you brought a net that was tremendous and you could reach to the bottom of the ocean depths, and you scooped up these fossils, and you found out that these are shallow-water fossils. Now what are these shallow-water creatures, doing in the deep oceans? How did that happen?

(2D) The other marine fossils helped us, showing that we found – that there was a regional uplift. Well, what happened here was, the crust subsided, and it *sank*, and that's why, that's why we have these shallow water fossils in the deep water – because the *crust* changed.

NOTE: In re-editing transcripts, commas are used here for brief pauses, a short dash where the rhythm of speech abruptly breaks and re-starts, and double dashes for longer pauses in parenthetical expressions. Three dots express long pauses in general; omissions are shown as (...).

APPENDIX B:

1 *Because The Porous Moments**

2 spill through the night
3 this indecision, which is sleep
4 in the outlaying fields
5 of each thought, is caught
6 in the gathering of winter.
7 Because the porous moments

8 spill through the night
9 we are never purged
10 of the hungers
11 our ancestors invented
12 in their craving for sleep
13 and the breathless heart.
14 Because the porous moments

15 spill through the night
16 each morning is returned
17 laden with lost time,
18 saturated with the burning pitch
19 of dreams; the narrow escapes.

*Printed here with the kind permission of the author

20 Because we are running
 21 from the weather,
 22 our weighted bodies
 23 are pierced by the vowels of our name,
 24 our fears tethered to the souls
 25 we can only sing by night.
 26 Because this lethargy,

 27 which we wear like a hat,
 28 is that other self
 29 drawing the curtains
 30 on each new discovery.
 31 I must breathe for the two of us;
 32 both with our bundles of rags,
 33 with our lungs to be filled.
 34 Because we strain so

 35 tugging this uncomfortable earth
 36 through the windows of common sense,
 37 most will give up.
 38 The few oddballs get nailed up
 39 to plug the bleeding holes.
 40 Because the porous moments

 41 spill through the night
 42 like a river which never sleeps
 43 confused by the weight of its birth,
 44 infuriated, as age abstracts
 45 the possibilities of life;
 46 the river with no skin,
 47 the blind river

 48 spilling through the night.

Martin Earl

REFERENCES

- BAKHTIN, M.M. (1981) 'Discourse in the novel'. In Michael Holquist, (Ed.) *The Dialogic Imagination*. University of Texas Press: Austin.
 HALLIDAY, M.A.K., MCINTOSH, A. AND STREVENS, P. (1964) *The Linguistic Sciences and Language Teaching*. Longman: London.
 HALLIDAY, M.A.K. (1978) *Language as Social Semiotic*. Arnold: London.
 — (1983) *A Short Introduction to Functional Grammar*. Sydney University Linguistics Department: Sydney.

- HALLIDAY, M.A.K. and HASAN, R. (1976) *Cohesion in English*. Longman: London.
- HARDAKER, D. (1982) *Language in a Regulative Context*. Honors Thesis, Department of Linguistics, University of Sydney.
- HASAN, R. (1980) 'The texture of a text.' In M.A.K. Halliday and R. Hasan, *Text and Context*, *Sophia Linguistica* 6 (Japan).
- (1981) 'Coherence and cohesive harmony.' Macquarie University, Department of English and Linguistics.
- LEMKE, J.L. (1982) 'Ideology, intertextuality, and register'. 9th International Systemic Workshop (Toronto). To appear in J.D. Benson and W. S. Greaves (Eds.) *Systemic Perspectives on Discourse: Theoretical Papers*. Ablex Publishing (USA)
- (1983) *Classroom Communication of Science*. Final Report to the National Science Foundation (USA). Available as *Research in Education* (ERIC Clearinghouse microfiche/hardcopy) ED 222 346.
- Forthcoming. 'Heteroglossia: Discourse and Social Conflict'. Paper for the 1984 Conference on Language and Ideology (Sydney)
- LYONS, J. (1977) *Semantics*. Cambridge University Press: Cambridge
- ROCHESTER, S. and MARTIN, J.R. (1979) *Crazy Talk: A Study of the Discourse of Schizophrenic Speakers*. Plenum Press: New York

ABSTRACT

Every text or occasion of discourse makes its social meanings against the background of other texts and discourses circulating in a community. Starting from this principle of general intertextuality, this article attempts to answer the questions of who is doing what to whom with these texts, and how; what social systems are maintained or altered through the construction of intertextual networks, what systems of thematic relations are being explicitly built by these texts; how these texts integrate which thematic systems and social discourse types of the community; and how they instantiate these in ways similar to and distinct from other texts.

With this goal in mind, the author undertakes to apply his method of thematic analysis to the social discourse of science education in a classroom context, then to the hermeneutics of modern poetry, using diagrams in which the thematic pathways are outlined in order to illustrate a specific method of thematic analysis and some of its points of contact with the notions of thematic development and foregrounding, and some problems of rhetoric, poetics, stylistic and structural analysis.

RÉSUMÉ

Le point de départ de cet article est le concept d'intertextualité généralisée, selon lequel tout texte, toute occasion de discours produisent un sens qui ne peut être appréhendé qu'en fonction de l'ensemble des textes et discours qui circulent dans une communauté socio-linguistique. Cela suppose l'existence de réseaux thématiques articulés sur des structures sociales.

L'entreprise analytique cherche donc à répondre aux questions suivantes: qui fait quoi à qui par le moyen de ces textes et discours? Comment ceux-ci opèrent-ils? Quels systèmes sociaux se trouvent perpétués ou modifiés grâce à ces constructions de réseaux intertextuels? Qu'est-ce qui caractérise les systèmes de relations intertextuelles ainsi construits? Comment se fait l'intégration de ces textes et de ces discours sociaux dans la communauté? Comment les textes se différencient-ils dans les processus de construction, de circulation et d'intégration?

Pour tenter de répondre à ces questions, l'auteur entreprend d'appliquer sa méthode d'analyse thématique d'abord au discours social de la pédagogie scientifique dans un contexte scolaire, puis à l'interprétation de la poésie moderne. Pour ce faire, il utilise des diagrammes dans lesquels il trace les trajets thématiques qui rendent compte de la construction intertextuelle du sens, tout en indiquant les points de contact entre sa méthode d'analyse thématique et les notions fournies par la problématique de la rhétorique, de la poétique, de la stylistique et de l'analyse structurale.

Jay L. Lemke (b. 1946) is an Associate Professor of Science Education at the City University of New York (Brooklyn College) and an associate member of the Department of Linguistics of the University of Sydney (Australia). He is the author of *Classroom Communication of Science* (1983), *Education and Semiotics: Instructional Processes in Social Systems* (1984) and "Ideology, Intertextuality, and Register" (forthcoming). His current research bears upon discourse ideology and the semiotics of education.