

# Literary expertise in the description of a fictional narrative

Barbara Graves and Carl H. Frederiksen \*

This research investigated literary expertise by examining how literary experts and students in English Literature describe a complex narrative conveyed by character dialogue. Performance protocols obtained in this task, were analyzed using a model of text description based on a stratified theory of discourse processing. The model identifies semantic units in subjects' text description protocols that consist of a set of possible 'discursive patterns'. Each discursive pattern includes a text unit being described, and a point of reference for the description, that is, a *reader*, *author*, or *text* perspective. Analysis of subjects' discursive patterns indicated that students closely paraphrased the text, recounting either narrative events or characters' speech, while experts relied on specific text information to support more inferential statements. Experts commented more extensively on the language used in the text, and their descriptions included references to narrative structure and functions of dialogue in the text as well as references to the author, the reader and the relationship between author and reader. Experts appear to view the text as the result of deliberate linguistic and conceptual choices made by an author, and awareness of these choices appears to have guided their descriptions of specific text structures.

## Introduction

This research investigated the literary expertise associated with describing a complex fictional narrative. The specific objective was to identify knowledge about discourse that the literary expert uses to generate a representation of a complex narrative when describing it. Adopting the view that a written text is the product of an act of communicating meaning from an author to a reader, we examined the extent to which the literary expert goes beyond the normal meaning-oriented comprehension process of the general reader and builds a complex representation of a text. Current cognitive theory of discourse processing suggests that such a representation should include: (1) a complex multi-layered representation of the discourse structure, (2) a representation of how a text reflects the communicative strategies or decisions of the writer, and (3) a representation of the comprehension processes required by a reader to understand the text. Consequently, literary expertise should include both an

\* Correspondence address: Barbara Graves, McGill University, Department of Educational Psychology, 3700 McTavish St., Montreal, Quebec, Canada H3A 1Y2.

understanding of the relationships between meaning and the selection of linguistic forms that may be used to express and communicate that meaning, and an ability to analyze and describe written discourse from different discourse perspectives including those of the author and the reader. It is expected that the literary expert is aware of the author's choices and the implication of these choices for the reader.

Cognitive research on the nature of expertise has been able to make explicit the strategies and knowledge underlying expert performance in a variety of problem-solving domains (e.g., Chase and Simon 1973, De Groot 1965, Glaser 1985). The results of this work support the view that experts structure and use information differently from novices and that these differences are linked to differences in prior domain knowledge and its organization. In addition, expert performance tends to be goal-directed and draws on information organized according to the purpose of a task. Most of this research examining expert–novice differences in comprehension and problem solving, however, has been carried out in science domains.

To date, there has been little systematic research, either within cognitive research on discourse comprehension or within literary studies, on the nature of expertise associated with the description of literary text which might lead to a model of that expertise. Much of the research focusing on literary discourse has been directed toward identifying how reading literature differs from reading other types of text (Schmidt 1982, 1983, Meutsch 1989, Vipond and Hunt 1987). Within current theories in literary studies, the role of the reader in literary communication is now considered to be an important topic (Culler 1981, Eco 1979, Fish 1980, Holland 1975, Iser 1978). This is in sharp contrast to traditional formalist criticism which regarded the text as a formal entity existing independently of the reader and focused on properties of the text as the basis for critical analysis or interpretation. This shift in emphasis within literary studies to include the social construction of meaning in the production and reception of literary text is reflected in current reader-response theory which has much in common with current cognitive models of comprehension as a multi-level, goal-oriented process. However, when viewed from a cognitive psychological perspective, this research often appears to be either atheoretical (Holland 1975) or directed towards elaborating models of an ideal, as opposed to a real, reader (Fish 1980, Iser 1978).

### **Cognitive models of discourse**

Cognitive models of discourse comprehension (Frederiksen 1986, Kintsch 1988, Van Dijk and Kintsch 1983) and production (Frederiksen and Donin in press, Frederiksen et al. 1989) have provided a theoretical framework for investigating how individuals understand and produce text. Theories of dis-

course comprehension have linked cognitive processes and representations to text characteristics (Frederiksen and Donin in press, Van Dijk and Kintsch 1983), to conceptual structures (Frederiksen 1986), and to literary theory (Beaugrande 1983, 1987, Brewer 1980). Models of semantic representation based on natural language semantics have been developed in cognitive science to describe propositional sentence meanings and conceptual structures in memory (Frederiksen 1975, 1986, Kintsch 1974, 1988, Meyer 1975, Schank 1975, 1982, Sowa 1984). These semantic representations are assumed to correspond to how an individual's knowledge of the world, of situations, and of text meanings is represented in memory. Using these models of semantic representation, researchers have been able to study the construction of conceptual meaning in discourse comprehension and production tasks, and to analyze individual differences in communicating knowledge and applying it in semantically complex domains (Frederiksen and Breuleux 1989). This research has led to the development of a multi-level model of discourse comprehension and production applicable to a general population of readers and writers and to a variety of text types (Frederiksen 1988, Frederiksen and Donin in press). The present study investigated whether these models of text representation and processing could account for the description of literary texts by experts. In this way the appropriateness of current cognitive discourse representation and processing theory for characterizing literary expertise is examined.

#### *Concurrent verbal reports*

Concurrent verbal report techniques have been applied successfully to the study of expert performance in comprehension and problem solving, and may also be applied to the study of expert performance in the description of literary text. One verbal report method that frequently has been used in research on problem solving is the think-aloud method in which subjects verbalize their thought processes during problem solving (Ericsson and Simon 1984). This method also has been used to study discourse comprehension and has been found to be sensitive to strategic aspects of the comprehension process (cf. Ericsson 1988). Another verbal report method used to study comprehension is to collect on-line interpretation protocols during reading (Frederiksen et al. 1989). In this approach subjects are required to provide an on-line interpretation of a text as they read, that is, a description of their developing understanding of a text in their own words. This method has been shown to be sensitive to structural aspects of the text and appears to provide information about routine semantic processing of a text at many different levels during reading. Thus, in text comprehension research on-line interpretation protocols provide data reflecting how readers go about understanding a complex text in real time, and they can be analyzed to determine at what levels of linguistic or semantic representation subjects are processing a text.

In the present study expert and student subjects produced on-line text-description protocols as they read a complex narrative. These protocols constituted the principle data source used to investigate expert and student performance. In general, the most effective use of verbal report data has been found to occur in situations in which a task is clearly specified and a well-defined task analysis can be carried out to identify predictable behaviors (Ericsson and Simon 1984). When studying semantically complex domains, it can be difficult to isolate specific behaviors, component processes, and representations. To objectively analyze complex text-description protocols and avoid idiosyncratic interpretation require both an explicit model of discourse structure and a systematic method for applying the discourse model to analyze the verbal data. The basic assumption of the present research is that cognitive theories and methods developed to study discourse communication and production, specifically the formal semantic representation models of Frederiksen (1986), i.e., propositional and frame analysis, can provide a principled framework for the analysis of subjects' descriptions of a literary text. These methods have been successfully applied to on-line verbal descriptions in a study of expertise in the interpretation of architectural plans (Gobert 1989, Gobert and Frederiksen 1988).

This study addressed the following questions: (a) Do text descriptions produced by experts and students refer to text representations and discourse communication processes identified in cognitive theories of discourse? (b) In terms of these representations, what distinguishes expert from student performance? Specifically, do experts identify representational levels and their relationships more completely than students when describing a literary text? (c) Do experts and students differ in their representations of the communicative situation in which the text is produced or received? That is, how do they view the author, text, and reader relationship? More specifically, do experts and students differ in their ability to generate representations of the text that include a model of a reader and an author? (d) Do experts focus their text descriptions more on salient properties of the text than students? (e) Do the descriptions they generate reflect more highly organized information? More explicitly, do experts generate more inferences that integrate and relate linguistic and semantic representations of information in the text, linking different types of text structures and meaning?

#### *Discursive patterns grammar*

In order to examine expertise in describing literary discourse, this study developed a model of text description that specifies semantic units consisting of a set of possible 'discursive patterns' that can occur in subjects' text-description protocols. The model of discursive patterns was specified by means of a recursive context-free grammar which we will refer to as a 'discursive

patterns grammar'. This use of a formal representational language to model discursive patterns is derived from research on semantic processing of discourse in which semantic grammars were used to model semantic representations and structure-generation processes in natural language comprehension and production (Frederiksen 1986). The discursive patterns grammar constitutes a model of experts' representations of literary discourse. The grammar also provides a basis for objective analysis of the text-description protocols subjects generate when describing a literary text. (The complete grammar is given in Appendix A.)

A discursive pattern consists of: (1) a *unit description* which identifies the type of text unit being described by the reader, and (2) a *discourse perspective* which is the point of reference of the description, that is, a text may be described from the point of view of the *reader*, the *author*, or simply the *text*. The discourse perspective reflects the rhetorical triad of text, reader, and writer. Within a discursive pattern, the unit descriptions are sub-categorized into *linguistic*, *propositional*, or *conceptual frame* levels corresponding to the three major representational levels which have been identified in multi-level models of discourse processing (e.g., Frederiksen et al. 1989). These discourse levels are further sub-categorized into specific unit types. Table 1 provides a summary of unit types for each discourse level along with the possible discourse perspectives.

A brief description of each discourse level together with examples follows. Most of the examples presented are from the text perspective, and while they are relatively simple, they serve to illustrate each discourse category. More complex discursive patterns will be presented at a later point.

(A) The *linguistic* level includes descriptions of the linguistic structures of the text (e.g., lexical/morphological, syntactic, cohesion, topicalization, punctuation, typography)

- (1) The ending of 'mope' is odd. (*Lexical / Morphological: Text perspective*)
- (2) There is a deliberate manipulation of the syntax. (*Syntactic: Author perspective*)
- (3) The lack of standard punctuation makes this difficult for the reader. (*Punctuation: Reader perspective*)

(B) The *propositional* level includes descriptions of the semantic structure of the text at the propositional level (e.g., propositional meaning, coherence relations, macro-structure relations, logical relations).

- (1) The meaning of 'look down her throat' is not clear. (*Propositional meaning: Text perspective*)
- (2) There is a discontinuity of action. (*Coherence relations: Text perspective*)

Table 1  
Summary of unit types and discourse perspectives.

Unit type	
(A) <i>Linguistic</i>	
- Lexical/Morphological	spelling, words, inflections
- Syntactic	choice of syntax, tense
- Cohesion	reference of words
- Topicalization	topical organization of information
- Typography/Punctuation	layout, capitalization, punctuation
- General	dialect, style, Black English Vernacular
(non-specific linguistic unit)	
(B) <i>Conceptual: propositional content</i>	
- Propositional meaning	inferred/literal, metaphor, hyperbole
- Coherence relations	description of semantic coherence
- Macro-structure relations	theme, summaries of propositions in text
- Logical relations	relations that connect text propositions
(C) <i>Conceptual: frame</i>	
- Description	character description/relations/names, setting/location
- Narrative	character actions, narrative level
- Dialogue	dialogue, indirect discourse, speech acts, conversation
- Problem/plan	character goals/plans, plot/situation, problem themes
- General	story, poem, novel
(non-specific conceptual unit)	
(D) <i>General</i>	description with no reference to any discourse level
(non-specific level)	
<i>Discourse perspective</i>	
Text	description of text
Author	description of text + reference to author
Reader	description of text + reference to reader
Author/Reader	description of text + reference to author + reference to reader

(3) 'Always going on over colored' and 'Now girl, what you say to Miss Millie?' clearly indicate racism. (*Macro-structure relations: Text perspective*)

(C) The *conceptual frame* level includes descriptions of semantic structures at the conceptual frame level. When the description of a frame level structure provided by the reader directly reflects or paraphrases the text, it is coded as **FRAME (TEXT-BASED)**. This is to distinguish text-based propositions from higher level derived descriptions in the subject's protocol which are coded as **FRAME (DERIVED)**.

The *descriptive frame* includes descriptions of conceptual structures that identify stative descriptive information, processes and events in the text.

(1) Sofia is in jail. (*Description [text-based]: Text perspective*)

The *narrative frame* includes descriptions of conceptual structures identifying the narrative structure of relations linking events in the text as specified by the narrative frame grammar (Frederiksen et al. 1986).

(1) The mayor slaps Sofia. (*Narrative [text-based]: Text perspective*)

(2) We have a mini narrative within the larger story. (*Narrative [derived]: Text perspective*)

The *dialogue frame* includes descriptions of conceptual structures identifying dialogue structure of the text, for example, conversational and turn-taking sequences, as specified by the dialogue frame grammar (Frederiksen et al. 1986) based on Hall and Dore (1980).

(1) She says, 'Hell No!' (*Dialogue [text-based]: Text perspective*)

(2) Here again it's dialogue. (*Dialogue [derived]: Text perspective*)

The *problem frame* includes descriptions of conceptual structures identifying the problem structure of the text including the plans and goals of the characters and problem states that underlie events or situations as specified by the problem frame grammar (Frederiksen 1989).

(1) Mister wants to visit Sofia (*Problem [text-based]: Text perspective*)

(2) There is a black-white conflict. (*Problem [derived]: Text perspective*)

## Method

### *Subjects*

Eight subjects participated in this study. The experts were two senior faculty members from McGill University's English department. The student group consisted of six sophomore students who were enrolled in an English literature course at McGill.

### *Materials*

The passage used was an excerpt from pp. 89–92 of the Pocket Books edition of *The Color Purple* by Alice Walker (1982). The excerpt contains two alterations which distinguish it from the original text. The character called 'Mr. ——' in the original appeared as 'Mister' in the stimulus text. Also two sentences on lines 16–18 of page 91 which refer to a character named 'Bub' were deleted. Both changes were made for the purpose of reducing difficulties that may arise when reading out of context. The novel was written as a series of letters and the excerpt used is one complete letter. The passage is a complex narrative conveyed by means of character dialogue which portrays the complexity of human interpersonal relations and addresses two themes: racism and sexism. The language of the text, which is written in Black English

Table 2  
Levels of embedding within the narrative frame structure.

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Dear God

- \* The narrator describes a conversation she is having with Little Squeak.
    - \*\* *She relates Odessa's report: 'I tell her what one of Sofia sister tell me and Mister'*
      - \*\*\* **SOFIA'S STORY:** Encounter with the Mayor's wife
  - \* The narrator breaks off the story: 'I stop telling it right there'
    - \*\* *The narrator resumes Odessa's report*
      - \*\*\* **SOFIA'S STORY:** The fight
  - \* The narrator breaks off again: 'This as far as I can go with it look like'
    - \*\* *The narrator resumes: 'What the prizefighter do in all this, I ast Sofia sister, Odessa'*
      - \*\*\* **SOFIA'S STORY:** The white powers win
    - \*\* *The narrator reports the dialogue between Mister and the Sheriff*
      - \*\*\* **SOFIA'S STORY:** Description of the beating
    - \*\* *The narrator reports Sofia's injuries while in jail*
- 

Vernacular, is not syntactically complex. This passage was chosen because it is a representative sample of complex fictional narrative that would be appropriate for analysis by literary experts and students. While only 780 words in length, the passage is both self-contained and interesting, and can be explored comfortably in an on-line experimental situation.

The passage begins as a letter to God and following the salutation are three levels of embedded narrative (table 2). The first level (\*) takes place in a nightclub where the narrator is telling the story of Sofia to her listener, Little Squeak. The second level (\*\*) consists of the narrator's reports of earlier conversations whereby she learned of the events she relates. The third level (\*\*\*) is the story itself, the story of Sofia and her confrontation with the white establishment.

### *Procedure*

#### *Task*

Subjects were interviewed individually and their protocols were recorded. All subjects were requested to provide a verbal description of the passage while reading it, commenting on its content and style. According to the experts, this type of task would be familiar and appropriate for anyone studying English literature. The passage was presented on a computer screen one sentence at a time with sentences accumulating on the screen. The rate of presentation as well as the number of sentences read before commenting was controlled by the subject. Subjects were free to scroll back in the text at any time. The experiment began with a brief practice session using an unrelated passage to ensure that the subjects understood the task and were comfortable with the computer.



*Analysis of text-description protocols*

Since the interest in this study was to identify the text units that the subjects identified while describing the text, only those segments of the protocol which referred to some feature of the text were retained. Direct quotations, elaborations, comments on thought processes, and evaluative statements not connected to a text unit were eliminated. In no case was more than 10% of a subject's protocol eliminated.

A propositional analysis (Frederiksen 1975, 1986) of each subject's protocol was carried out in order to identify the semantic information present. Frederiksen's propositional model was used because it is a well-defined system that is capable of representing a wide variety of semantic structures and relations. With the proposition as the unit of analysis, the discursive patterns grammar was then applied to further analyze the protocols. This was accomplished using an interactive computer program, CODA (1988), which interprets the discursive patterns grammar expressed in terms of rewrite rules (Appendix A), and presents the user with a series of choices based on the grammar. These choices assist the user in building a representation of the subjects' descriptions in the form of a parse tree. This computer-assisted encoding of protocols provides a rigorous method for discourse analysis.

*Discursive patterns in text-description protocols*

A unit description in a discursive pattern may be a *simple description*, a *linked description* or contain *embedded descriptions*. This range in complexity can be represented by the grammar and will be illustrated with examples. For each example the propositional representation is given followed by the discursive pattern.

(1) *Simple descriptions*: The simplest structure consists of a single proposition which refers to a linguistic or semantic unit of the text plus an identifying relation such as attribute, part, category, or location etc., that gives a property of the unit. The identifying relation may be null.

Example: 'Here the syntax is abridged.'

1.1. syntax

ATTRIBUTE: abridged

DISCURSIVE.PATTERN

(TEXT.PERSPECTIVE (SEG.READ xx) (SEG.REF xx))

(UNIT.DESCRPTION

(SIMPLE (PROP.NUMBER 1.1)

(UNIT.TYPE (LINGUISTIC SYNTAX))))

(TRUTH.VALUE POS))

In this example, the *discourse perspective* is *text perspective*, and the *unit description* is SIMPLE and of the LINGUISTIC UNIT TYPE 'Syntax'.

(2) *Linked descriptions*: A unit description may also contain propositions consisting of concepts or other propositions that are linked by identity relations, algebraic relations of equivalence, proximity and order, or dependency relations in which one proposition depends on another.

Example: 'The typography is *like* a private letter.'

1.1. typography	IDENTIFYING RELATION: (null)
1.2. letter	ATTRIBUTE: private
1.3. PROXIMITY	[typography] [1.2]

```
DISCURSIVE.PATTERN
  (TEXT.PERSPECTIVE(SEG.READ xx) (SEG.REF xx)
    (UNIT.DESCRPTION
      (LINKED(PROP.NUMBER 1.3)
        (LINK RELATION.Proximity)
          (ARGUMENT
            (ARGUMENT.ID(PROP.NUMBER 1:1))
            (UNIT.TYPE(LINGUISTIC Typography)))
          (ARGUMENT
            (ARGUMENT.ID(PROP.NUMBER 1.2))
            (UNIT.TYPE(FRAME(DIALOGUE Exchange))))))
    (TRUTH.VALUE POS)))
```

In this example the *discourse perspective* is text perspective, and the *unit description* consists of a LINGUISTIC UNIT TYPE linked to a DIALOGUE FRAME. UNIT TYPE by a PROXIMITY RELATION.

(3) *Embedded descriptions*: The discursive patterns increase in complexity whenever unit descriptions contain embedded propositions within a segment of the subject's protocol. The example below illustrates how the discursive patterns grammar represents embedded propositions which identify different linguistic or conceptual units and which themselves contain embedded propositions. There may be more than one level of embedding.

Example: 'Now clearly we're in the area of racism with the condescending wife, the white in this case, saying "would you like to be my maid?".'

1.1. racism	RELATED ACT: 1.2, 1.3, 1.4
1.2. condescend	PATIENT: wife
1.3. IDENTITY	[wife] [white]
1.4. say	AGENT: wife
	THEME: "would you like to be my maid?"

DISCURSIVE PATTERN  
 (TEXT.PERSPECTIVE (SEG.READ xx) (SEG.REF xx)  
 (UNIT.DESCRPTION  
 (SIMPLE (PROP.NUMBER 1.1)  
 (UNIT.TYPE (FRAME (PROBLEM Problem.theme)))  
 (EMBEDDING.LEVEL1  
 (SIMPLE (PROP.NUMBER 1.2)  
 (UNIT.TYPE (FRAME (DESCRIPTIVE Event.unit))))  
 (LINKED (PROP.NUMBER 1.3)  
 (LINK RELATION.Identity)  
 (ARGUMENT  
 (ARGUMENT.ID (CONCEPT the wife))  
 (UNIT.TYPE (FRAME (DESCRIPTIVE State.unit))))  
 (ARGUMENT  
 (ARGUMENT.ID (CONCEPT the white))  
 (UNIT.TYPE (FRAME (DESCRIPTIVE State.unit))))  
 (SIMPLE (PROP.NUMBER 1.4)  
 (UNIT.TYPE (FRAME (DIALOGUE Speech.act))))))  
 (TRUTH.VALUE POS))

In the above example, the *discourse perspective* is text perspective, and the *unit description* consists of a PROBLEM FRAME UNIT TYPE which has embedded within it (a) one simple description consisting of one DESCRIPTIVE FRAME UNIT TYPE, (b) one linked description containing two DESCRIPTIVE FRAME UNIT TYPES, and (c) a DIALOGUE FRAME UNIT TYPE.

All of the examples presented so far have been from the *text perspective*. The following three examples illustrate the discourse perspective of the *author*, the *reader*, and the *author-reader*. The propositional representation followed by the complete discursive pattern is provided only for the final example.

A discursive pattern from the *author* perspective contains a unit description together with a description of the production process or intended effect or goal of the author.

Example: Here there is a deliberate manipulation of the syntax to represent BEV.

A discursive pattern from the *reader* perspective contains a unit description together with a description of the reader's response or reader's goals. A theoretical reader may be described or the subject may take the role of the reader. In either case the reference to the reader must be explicit.

Example: The reader now has to fill in the deleted punctuation in order to understand the dialogue.

A discursive pattern from the *author-reader* perspective contains a unit description together with a description of the author's production process as well as the intended effect on the reader. The following example from an expert protocol serves to illustrate:

Example: "The *author* reveals the familial relationships slowly to have the *reader* guess and generate hypotheses about them."

1.1. reveals	AGENT: author, RESULT THEME: 1.2, GOAL: 1.3, 1.4, ATTRIBUTE: slowly
1.2. relationships	CATEGORY: familial
1.3. guess	AGENT: reader, THEME: 1.2
1.4. generate	AGENT: reader, RESULT: 1.5
1.5. hypotheses	THEME: 1.2

#### DISCURSIVE PATTERN

```
(AUTH/READ.PERSPECTIVE(SEG.READ xx) (SEG.REF xx)
  (AUTH/READ.CASE
    (RESULT(RESET.POINTER reveals)))
    (UNIT.DESCRPTION
      (SIMPLE(PROP.NUMBER 1.2)
        (UNIT.TYPE (FRAME(DESCRIPTIVE Network))))))
  (AUTH/READ.CASE
    (GOAL.READER(GOAL.POINTER to have)))
    (UNIT.DESCRPTION
      (SIMPLE(PROP.NUMBER 1.3)
        (UNIT.TYPE(FRAME(DESCRIPTIVE Network))))))
  (AUTH/READ.CASE
    (GOAL.READER(GOAL.POINTER to have)))
    (UNIT.DESCRPTION
      (SIMPLE(PROP.NUMBER 1.4)
        (UNIT.TYPE(FRAME(DESCRIPTIVE Network))))))
  (TRUTH.VALUE POS))
```

When the discursive pattern is from the perspective of the *author*, the *reader*, or the *author-reader*, it is possible to specify a case frame which contains RESULTS and GOALS. In addition, from the *AUTHOR-READER* perspective one can elaborate further by choosing RESULT.READER or GOAL.READER and identify when the result or goal is a specific reader response.

#### *Design*

The experimental design corresponds to a multivariate repeated measures design. The between-subjects factor is level of expertise with the two experts

Table 3  
Within-subjects variables used in the analyses.

Levels	Unit types	Discourse perspectives			
		Text	Author	Reader	Author/Reader
Linguistic	Lexical/Morphological Syntactic Cohesion Topicalization Typography/Punctuation General				
Propositional	Propositional meaning Coherence Macro-structure relations Logical relations				
Frame	Description Narrative text-based Narrative derived Dialogue text-based Dialogue derived Problem text-based Problem derived General				
General					

comprising the expert group. It must be acknowledged that treating such a small  $N$  as a group greatly reduces the power of the statistical tests and in no way allows for statements about lack of effects. However, statistically significant  $F$ 's will identify effects that are sufficiently strong to be detected in spite of the small  $N$ . The within-subjects variables are the discourse levels, unit types and discourse perspectives (see table 3). The dependent variables were frequencies of responses in the categories identified in table 3. Multivariate repeated measures analyses of variance were carried out to obtain descriptive statistics and to examine within-group contrasts of the dependent variables. For each analysis, specific within-group factors were examined for main effects and interactions with the between-group factor (level of expertise) in order to identify differences between the experts and the students. A series of planned contrasts between pairs of dependent measures were carried out to ascertain the effects of the within-subjects factors in the multivariate repeated measures analyses.

## Results

Results will be described from two sets of analyses: (a) analyses of unit types pooling over discourse perspectives, and (b) analyses of discourse perspectives pooling over unit types. Each analysis investigated expert–student differences. An analysis of unit types within each discourse perspective revealed that frequencies of students' descriptions within the *author*, *reader*, and *author-reader* perspectives were too low to differentiate their use of unit types. For the purpose of the analyses of variance, the two experts were treated as a single group. All graphic displays of the data, however, present each expert separately so that differences between experts will be apparent. The student data are presented in terms of the group means.

### *Description of unit types by experts and students*

With respect to the three main levels, linguistic, propositional and conceptual frame, the major portion of all protocols was devoted to a description of conceptual frame units (figure 1). During the description of the text all subjects commented predominantly on high level conceptual frame structures (mean = 255.63) and less on the linguistic (mean = 21.88) and propositional (mean = 22.13) features of the text [ $F(2,5) = 59.056$ ,  $p < 0.004$ ].

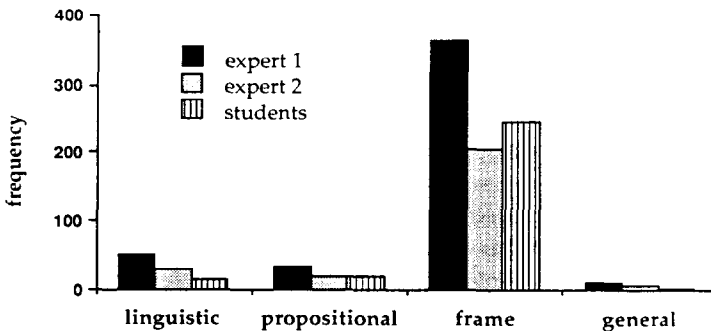


Fig. 1. Linguistic, propositional, frame and general unit types by expertise. Note: The scores for the student group are the means of the group.

### *Linguistic level*

An analysis of the linguistic categories reveals that experts generated significantly more information about the linguistic structures of the text (mean = 41.0) than did the students (mean = 15.5) [ $F(1,6) = 11.956$ ,  $p < 0.013$ ]. The experts' comments were divided quite evenly between the general linguistic category (mean = 22.5) and the specific linguistic categories (mean = 18.5) with one expert leaning more heavily toward the general category (figure 2). In contrast, the students provided even fewer comments regarding the general

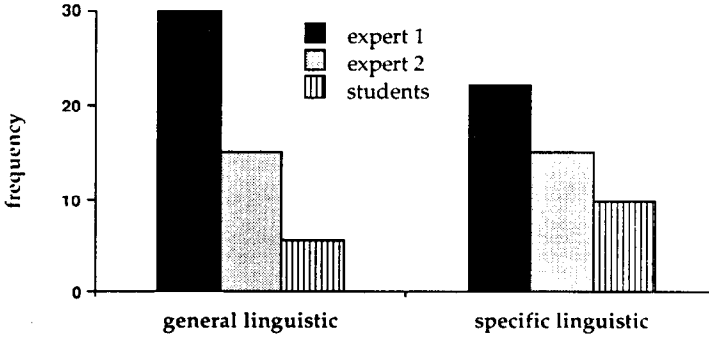


Fig. 2. General and specific linguistic unit types by expertise. *Note:* The scores for the student group are the means of the group.

linguistic structure (mean = 5.67) than they did about the specific linguistic features (mean = 9.83).

An analysis of the specific linguistic categories used, revealed that subjects described the syntax and punctuation in the text as well as specific words (figure 3). There was little mention of either the cohesive structures or the topicalization of information in the text. The significant interaction between expertise and the contrast of lexical/morphological versus syntactic information [ $F(1,6) = 10.202, p < 0.0188$ ], suggests that students tended to concentrate their linguistic comments on the lexical/morphological structures, while the experts focused more on the syntax.

*Propositional level*

Two of the contrasts among the within-subjects variables were found to be statistically significant: the contrast of literal/figurative meaning versus pro-

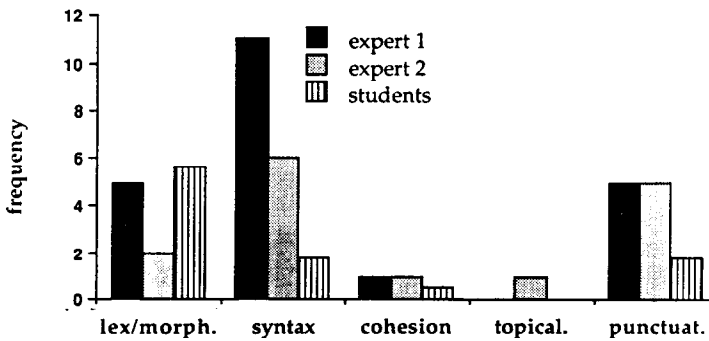


Fig. 3. Specific linguistic unit types by expertise. *Note:* The scores for the student group are the means of the group.

positional coherence [ $F(1,6) = 10.233$ ,  $p < 0.0187$ ] and the contrast between macro-structure and the logical relations [ $F(1,6) = 9.881$ ,  $p < 0.0200$ ]. An examination of the means shows that most of the information at this level pertained to the meaning of text propositions, including figurative and literal meaning (mean = 11.75), followed by information about the logical relations connecting text propositions (mean = 5.88).

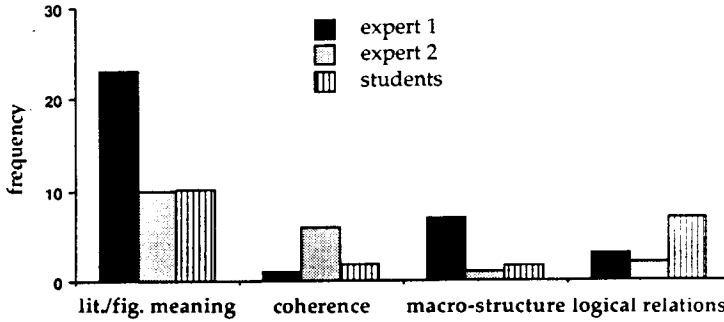


Fig. 4. Propositional unit types by expertise. *Note:* The scores for the student group are the means of the group.

#### *Conceptual frame level*

Regarding the frame categories, all planned contrasts between the frame types were significant: descriptive versus narrative [ $F(1,6) = 26.093$ ,  $p < 0.0023$ ], narrative versus dialogue [ $F(1,6) = 22.889$ ,  $p < 0.0031$ ], and dialogue versus problem frame [ $F(1,6) = 10.921$ ,  $p < 0.0164$ ]. Subjects commented most on the descriptive frame (figure 5). After descriptive information (mean = 124.13), it was the narrative structure of the text (mean = 64.88) that was identified most often, followed by comments on the dialogue (mean = 43.0) and problem frames (mean = 21.88).

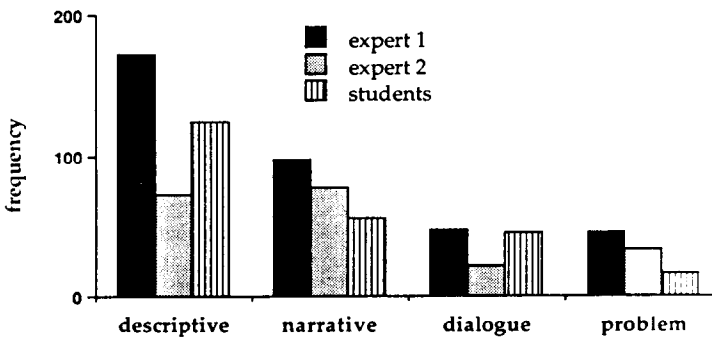


Fig. 5. Specific conceptual frame types by expertise. *Note:* The scores for the student group are the means of the group.



A significant interaction between expertise and the contrast of narrative with dialogue unit types [ $F(1,6) = 15.446$ ,  $p < 0.0078$ ] occurred in which the experts focused on the narrative frame of the text with less description being given to the dialogue structure. Students, however, did not demonstrate this preferential processing and generated only moderately less information regarding the conversational structure than the narrative.

#### *Text-based versus derived descriptions*

Inspection of the contrast between text-based and derived information, collapsing across the narrative, dialogue and problem frames, revealed a difference between students and experts (figure 6). Descriptions identified as text-based represent information which repeats or paraphrases the text itself, while derived descriptions reflect high-level or situational references derived inferentially either from the text or from prior knowledge. While there was no difference in the total amount of text-based versus derived information, the significant interaction between those two variables with expertise [ $F(1,6) = 19.780$ ,  $p < 0.0044$ ] indicates that the students and experts were doing different things. The student protocols contained a high proportion of text-based descriptions while the expert protocols had more inferential text-derived descriptions.

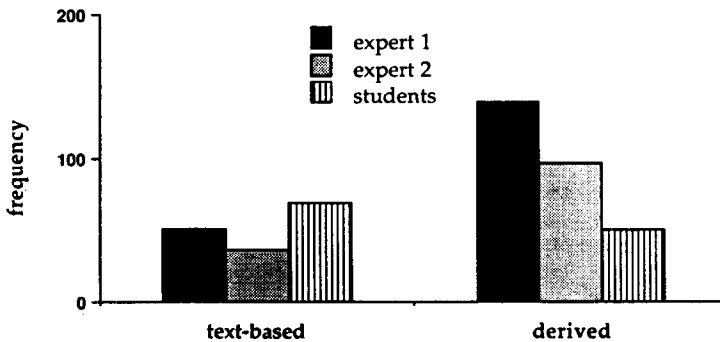


Fig. 6. Text-based and derived unit types by expertise. *Note:* The scores for the student group are the means of the group.

An analysis of the specific interactions of expertise with contrasts of text-based versus derived descriptions for each of the specified frames (figure 7) revealed a statistically significant interaction within the narrative frame [ $F(1,6) = 23.504$ ,  $p < 0.0029$ ]. In addition to a general difference between text-based and derived descriptions, experts generated more derived descriptions of the narrative frame while students generated more text-based descriptions.

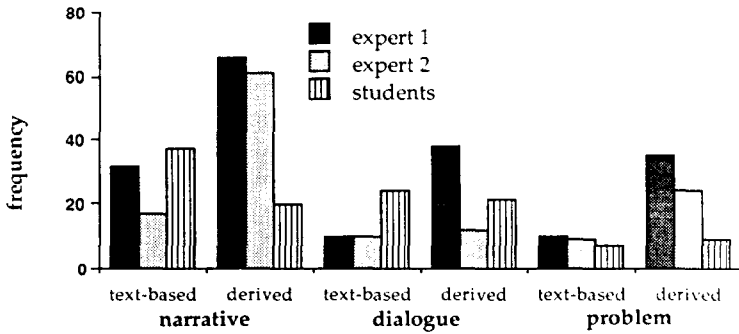


Fig. 7. Text-based and derived unit types within three specific conceptual frame types by expertise. Note: The scores for the student group are the means of the group.

#### *Discourse perspectives and expertise*

The information provided by the discourse perspective suggests additional distinctions between expert and student performance. The discourse perspective is the point of reference of the description. The within-group contrast revealed a statistically significant effect for text perspective descriptions versus the other three perspectives [ $F(1,6) = 194.776$ ,  $p < 0.0001$ ]. When asked to describe a text, all subjects overwhelmingly devoted most of their comments to doing just that (figure 8). The student protocols were almost exclusively situated within the text perspective, that is, students provided a description of the text only. In contrast to this, the experts included references to the author, the reader and the relationship between author and reader. A separate analysis of variance for unit descriptions coded only as *author*, *reader*, and *author-reader* was carried out (figure 9), and showed that there was a large statistically significant difference in the total amount of semantic information generated by the experts vs. the student group pooled over these three perspectives [ $F(1,6) = 59.751$   $p < 0.0003$ ].

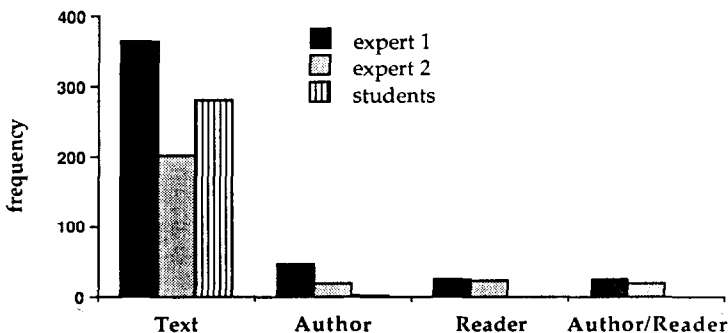


Fig. 8. Unit descriptions coded for 4 discourse perspectives by expertise. Note: The scores for the student group are the means of the group.

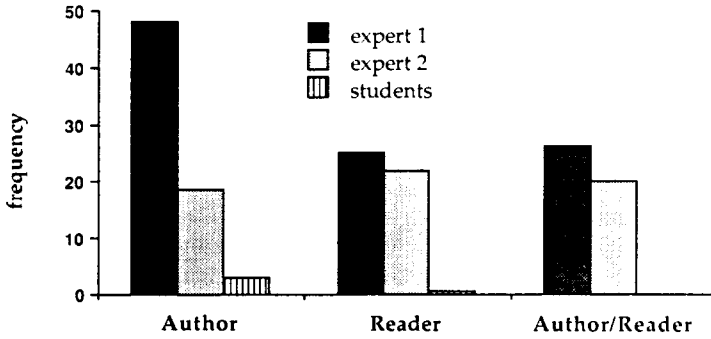


Fig. 9. Unit descriptions coded for 3 discourse perspectives by expertise. *Note:* The scores for the student group are the means of the group.

## Discussion

One of the reasons for choosing this passage from *The Color Purple* was that it is written in Black English Vernacular which, it was hoped, would lead students to comment on some aspects of the language. Interestingly, what they chose to comment on were the individual words or the word endings, for example, 'Harpo *mope*' instead of 'mopes'. They spoke about the oddity of the expressions without attempting to identify their possible function. In contrast, the experts concentrated their discussion on the syntax of the text with additional comments pertaining to the punctuation, or lack of it, and then the lexical items. That the experts commented more extensively on the linguistic structures of the text suggests that experts regard the language as an important feature meriting discussion. The expert discussion of the language seemed to have two foci. One was to situate the text with respect to time and location as in the following excerpt:

'Now "Baby this she say" well, "she say" seems to be this kind of social dialect we associate with Southern black perhaps or country perhaps...'

The other was in conjunction with the author's manipulation of specific linguistic structures in order to achieve certain goals and effects:

'It's a self-conscious effort to do a kind of stream of consciousness style which is of course deliberately elliptical and telegraphic and [asks the reader-] invites the reader to fill in all the deleted syntax, punctuation etc.'

The language of a text, its register and syntax, are among the vehicles through which the conceptual aspects of the text are realized. This acknowledgement by the experts of purposeful behavior on the part of the author, was lacking in

the student protocols as is evidenced by the low frequency of comments coded from within the *author* perspective.

Since the text is predominantly a complex narrative with several levels of narrative embedding, it was expected that readers would direct their efforts to making sense of the narrative frame elements. All subjects, however, most often identified information about the descriptive frame. This can be explained by the fact that descriptive information is used to elaborate information at all other conceptual levels. Consider the example, 'The black-white conflict is evident with the white mayor and the black woman'. While the problem frame conflict is identified, there are two accompanying propositions at the descriptive frame level, 'white mayor' and 'black woman'.

After descriptive information, readers did identify the narrative structure of the text most often. The narrative information in the passage, however, is conveyed by means of dialogue in two main forms: the entire passage is a letter written by the narrator to God, and indirect discourse is used to link the embedded narratives. While both experts seemed to use the narrative frame as the structuring principle for their discussion of the text, the students appeared more ambivalent and their descriptions were divided between the narrative and dialogue frames. In addition, students' descriptions closely paraphrased the text, repeating either the narrative events or the characters' speech, while experts' descriptions reflected higher-level references to narrative structure or the functions of the dialogue which were derived either from the text or from prior knowledge. Experts relied on specific information in the text most often as a support for more inferential statements.

Experts also included references to the author, the reader, and the relationship between the two, while students' descriptions were situated almost exclusively within the *text* perspective. It seems as if the experts viewed the text as the result of deliberate linguistic and conceptual choices made by an author and awareness of these choices and their significance for a reader appears to have guided their descriptions. When confronted with unusual language or situations in the text, the experts seemed to assume that their uncertainties were temporary and would be clarified in time. The following quote illustrates this strategy:

'One of the things that's going on here is that the reader has to piece out and follow and see who's who [...] because it's representing a dialogue where [...] the internal context makes the references clear and the reader, who's in the external context [...] can't follow exactly who's who at this point *but obviously [...] figuring out the puzzle will happen [...] as the text goes on.*' (emphasis added)

In contrast the student readers did not exhibit this orientation in any consistent manner, and focused on events and character descriptions, suggesting that the text was viewed more in terms of a narrative or dialogue sequence.

When confronted with ambiguity or lack of clarity, students reacted to it as a reflection of their own inadequacy. It would seem that not only do students work more from the surface information but that they are so dependent on it that when it doesn't make sense, they have no recourse but to flounder. If their representation of the text does not include a model of the author then there is no one besides themselves to hold accountable. This is distinct from the model the expert uses which includes expectations regarding the responsibilities of the writer to the reader and the responsibilities of the reader toward the text.

The role of prior knowledge of the novel, *The Color Purple*, and its influence on performance of subjects was informally assessed. Neither expert had read the novel nor seen the movie. Three students had read the book: two had read it as part of a course and one student had read it independently. Another student had seen the film. An examination of descriptive statistics for the student group indicates no correlation between prior knowledge and (a) the overall length of the protocols, (b) the distribution of semantic information among the three main levels, linguistic, propositional and conceptual frame, (c) the amount of text-based versus derived information, (d) the allocation of semantic information to the specific conceptual frames, and (e) the distribution of semantic information within the four discourse perspectives.

Prior knowledge of the novel seemed not to be pertinent to performance of the task. This may be attributed to both the focus of the study and the nature of the task. The interest of this study centered on identifying what types of descriptions subjects generated while performing the text-description task during reading. Subjects were not requested to either interpret or evaluate the passage, only to describe its style and content. In addition, only an excerpt from the novel was presented and instructions directed the subject to describe it specifically. It was expected that if a student did identify the author and was familiar with important themes in her work, this might boost the number of comments made both with respect to the author and the problem frame. However, this was not the case.

## **Conclusion**

If research is going to successfully examine complex interactions of readers with literary discourse, the models of discourse processing employed to analyze readers' protocols will have to be precisely defined as well as theoretically motivated. A basic assumption of this research was that the formalisms of semantic representation, namely propositional and frame analysis, that have been developed in cognitive science can be successfully applied to elaborate models for specific types of reading and tasks. The model of discursive patterns which was developed to account for subjects' descriptions of a literary text includes an overall general level (table 1) in addition to the linguistic,

propositional, and conceptual frame levels. The low frequencies of unit descriptions of the general level (mean = 5.13) compared with the other levels (mean = 299.63) suggest that the three discourse levels of linguistic, propositional and conceptual frame adequately captured the semantics of the descriptions generated by subjects. In the same way the frequencies of specific frame types of descriptive, narrative, dialogue and problem (mean = 253.88) as compared with the frequencies of general frame type (mean = 1.75), demonstrate that these categories were sufficient to characterize the information subjects produced about the text at a conceptual level. At the linguistic level, however, both the specific linguistic and the general linguistic categories were necessary to account for the subjects' linguistic descriptions. Thus the *general linguistic* category functioned differently from the other two general categories and perhaps should be renamed 'language' to distinguish it and reflect its importance. In this way the model of discursive patterns was able to account for readers' descriptions of a literary text.

The discursive patterns grammar allows for the representation of discursive patterns built on propositions that are often embedded. The complexity of discursive patterns enables further exploration of the levels of embedding of descriptions. For example, it is possible to observe summary statements that span the whole problem frame structure of the text, embedding three or four levels of description. This is to be expected since in describing a text, a reader may eventually come to articulate an overall plan for the work and identify the choices made to realize that plan. An examination of the discursive patterns suggests that some readers generate high-level frames that dominate a series of embedded unit descriptions. Since the present study focused mainly on the development of a framework to examine expertise in literary text description and to characterize that expertise in terms of frequencies associated with the identified descriptions, the complexity of the discursive patterns for each subject has not been fully analyzed. The next step in this research should be to examine the structure of the discursive patterns produced, rather than simply their frequency, to determine how conceptual frames were used to structure descriptions.

This comparison of how students and experts described a literary text while reading is based on a small sample and one particular text. While it contributes to our understanding of expert performance in this domain, future research should be directed towards characterizing this expertise more broadly. An examination of the performance of additional literary experts is needed in order to further specify and elaborate the expert model. One analysis which was not carried out in the present study but which is recommended with a larger sample, is the examination of the author, reader and author-reader perspectives specifying whether the unit description functions as a GOAL or as a RESULT as in the example 'Here there is a deliberate manipulation of the syntax (RESULT) to represent Black dialect (GOAL)'. This would provide ad-

ditional information about the model of the author, reader or author-reader which the expert constructs. If additional experts also exhibit a model of an author and a reader in their descriptions of a literary text, it would be possible to compare their discursive patterns within these discourse perspectives. It would be desirable to select experts from different critical orientations within literary theory, thus making it possible to ascertain to what extent literary experts from different critical traditions represent and process text differently.

The text used in this study has certain salient characteristics such as a complex narrative structure and the use of conversational Black dialect along with indirect discourse to convey the narration. It successfully relates powerful social, moral and legal issues pertaining to racism and sexism, by means of an inhibited and simple language. How would the picture of expertise change using different texts? Would experts and novices shift their descriptions to other characteristics for texts having different salient features? How might their descriptions vary if presented with a problematic text which in some respect is not well written? Importantly, is expertise associated with analysis of literary text domain specific, or is it generalizable to other domains of text analysis, for example to legal text?

Expanding the sample, varying the experimental text and examining the structure of subjects' representations along with the processes that act on them will contribute to a more precise characterization of these discourse skills and result in a better understanding of how the expert generates an integrated representation.

## Appendix A: Discursive patterns grammar

### *Notation:*

- indicates a rewrite rule
- | indicates 'or', that is, a choice among arguments
- \* indicates that the rule may be repeated
- { } indicates that the rule is optional
- Quoted lower case identifier indicates a literal

The following identifiers call strings: SEG.READ, SEG.REF, GOAL.POINTER, RESULT.POINTER, PROP.NUMBER, CONCEPT, GENERAL, OTHER.

```
DISCURSIVE.PATTERN → TEXT.PERSPECTIVE | AUTHOR.PERSPECTIVE |
                    READER.PERSPECTIVE | AUTH / READ.PERSPECTIVE
TEXT.PERSPECTIVE → SEG.READ SEG.REF TEXT.PATTERN TRUTH.VALUE
TEXT.PATTERN → UNIT.DESCRPTION
AUTHOR.PERSPECTIVE → SEG.READ SEG.REF AUTHOR.PATTERN * TRUTH VALUE
AUTHOR.PATTERN → AUTHOR.CASE UNIT.DESCRPTION
AUTHOR.CASE → GOAL | RESULT
```

READER.PERSPECTIVE → SEG.READ SEG.REF READER.PATTERN \* TRUTH.VALUE  
 READER.PATTERN → READER.CASE UNIT.DESCRPTION  
 READER.CASE → GOAL | RESULT  
 AUTH/READ.PERSPECTIVE → SEG.READ SEG.REF AUTH/READ.PATTERN \*  
 TRUTH.VALUE  
 AUTH/READ.PATTERN → AUTH/READ.CASE UNIT.DESCRPTION  
 AUTH/READ.CASE → GOAL | RESULT | GOAL.READER | RESULT.READER  
 GOAL → GOAL.POINTER  
 RESULT → RESULT.POINTER  
 GOAL.READER → GOAL.POINTER  
 RESULT.READER → RESULT.POINTER  
 UNIT.DESCRPTION → SIMPLE | LINKED  
 SIMPLE → PROP.NUMBER UNIT.TYPE { EMBEDDING.LEVEL } \*  
 LINKED → PROP.NUMBER LINK ARGUMENT ARGUMENT \* { EMBEDDING.LEVEL } \*  
 ARGUMENT → ARGUMENT.ID UNIT.TYPE  
 ARGUMENT.ID → PROP.NUMBER | CONCEPT  
 EMBEDDING.LEVEL → SIMPLE | LINKED  
 LINK → RELATION.Identity | RELATION.ALGEBRAIC  
 RELATION.ALGEBRAIC → 'R.Equiv | 'R.Ord | 'R.Prox | 'R.P.Ord  
 UNIT.TYPE → LINGUISTIC | PROPOSITIONAL | FRAME | GENERAL  
 LINGUISTIC → 'Lexicon | 'Morphology | 'Syntax | 'Cohesion | 'Topicalization  
                   | 'Typography | 'Punctuation | GENERAL  
 PROPOSITIONAL → PROP.MEANING | 'Coherence | 'Macro.relation |  
 LOGICAL.RELATION  
 PROP.MEANING → 'General | 'Metaphor | 'Analogy | 'Idiom | 'Hyperbole | OTHER  
 LOGICAL.RELATION → BINARY.DEPENDENCY.REL | CONJOINT.DEPENDENCY.REL  
 BINARY.DEPENDENCY.REL → 'Cau | 'Cond | 'If | 'Iff  
 CONJOINT.DEPENDENCY.REL → 'And | 'Or-Excl | 'Or-Alt  
 FRAME → DESCRIPTIVE | NARRATIVE | DIALOGUE | PROBLEM | GENERAL  
 DESCRIPTIVE → 'Network | 'State.unit | 'Event.unit  
 NARRATIVE → 'Scene/Episode | 'Event.unit  
 DIALOGUE → 'Exchange | 'Speech.act  
 PROBLEM → 'Problem.theme | 'Character.goal  
 TRUTH.VALUE → 'POS | 'NEG | 'INT

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