Readers, Texts, and Second Languages: The Interactive Processes

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READING HAS BEEN THE FULCRUM OF WHAT amounts to an interdisciplinary revolution.[1] Viewed in the past as either a top-down or bottom-up process, we now think reading comprehension results from interactive variables that operate simultaneously rather than sequentially (Rumelhart 172; Schank). Research into one of these variables, schematizing (the reader's prior knowledge applied to text assertions), suggests that, in L2 as in L1, what is understood depends on the reader rather than on the text (Steffensen et al.; Bernhardt 26). In literary criticism, reader response theorists support this view with the claim that "meaning has no effective existence outside of its realization in the mind of the reader" (Tompkins: ix). Increasingly, many researchers in many fields find that the text cannot be described apart from the comprehender (Pichert & Anderson).

How does this insight apply to reading a second language? Are students able to construct meaning from a foreign language text, to read it to learn? Or does the need to process language on the one hand defeat the goal of processing information on the other? To examine these questions I will consider current research from five points of view: 1) the reader's role in the wake of new models of language and textual meaning; 2) L1 research that has revised definitions of textual meaning and reader processing; 3) L2 research in reader processing of schemata; 4) the relationship between L2 language competency and reader strategies; and 5) classroom applications of the foregoing.

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READER'S ROLE: LANGUAGE MEANING AND TEXT INTERPRETATION

The first point concerns how we decide what is comprehended of a text. What does a text *mean* to a given reader? Why do we reject the notion that a text can "mean" the sum of dictionary definitions (*langue*), existing independent of reader response? Because semioticians from de Saussure to Eco tell us that once words are in a context (*parole*), they no longer have independent existence. Words in texts function as signs within a culture-bound system. Consequently, any product of the reader's comprehension will depend on the reader's grasp of the constituent systems.

Iser describes how readers interact with a text's system of signs. He illustrates the process with an example from Thackeray's *Vanity Fair,* pointing out that the first time Becky Sharp manipulates someone, the reader registers this as an isolated fact. By the second or third manipulation, however, the reader will probably see a pattern of "habitual opportunism" (p. 115). For this reader, Becky's request is no longer an isolated event; it belongs to a recurring schema. The reader has synthesized textual information (Becky's motives, behaviors, impact on others) and constructed from that synthesis a system of attributes and expectations linked to his or her prior knowledge.

Defining Comprehension: The Reader's New Role. In the past, comprehension was often equated with a reader's capacity to replicate a text (e.g., in summaries of facts, translations, or matching exercises). Today, that view of comprehension has been replaced by a conceptual model influenced by research on memory and recall. Emerging from that research are two recently verified assumptions: 1) short-term memory is incapable of storing information read or heard for more than about ten seconds unless it is rehearsed (Murdock); and 2) re-

hearsal is conducted in "working memory," a function within short-term memory. Working memory reclassifies incoming information by assigning it to existing configurations in the mind (Kintsch 108, 109). Consequently, De Beaugrande, among many others, concludes that "what is in fact comprehended is not sentences, but conceptual content" (65: 180). In short, *readers comprehend a text when they construct a mental representation for incoming pieces of verbal information.* Twentieth-century readers might construct the mental representation, "Becky Sharp is an opportunist," for Thackeray's words, sentences, and extended discourse from another era.

Defining the Text. Rarely, if ever, do mental representations of a group of readers concur, even when those readers are expert analysts. *How* readers comprehend will depend on their individual perspectives and background because "the meaning and structure of a text are not inherent in the print but are invited by the author and imputed to the text by the reader" (Schallert *et al:* 272). Are there different kinds of imputations? Hermeneutic models distinguish between three: 1) conceptualizing of *explicitly stated information;* 2) conceptualizing of *intentionality* created by the author's structuring of that information; and 3) conceptualizing of the *significance* that the author's message system has for the reader (Hirsch). The first factor, textual assertion, is verifiable in the text. The second factor, inferences to be drawn from explicit language, links text- and reader-based information. The third factor, significance, is verifiable only as a reader-based component (Swaffar 197). Together, these three factors are the basis for a reader's textual imputations.

Why does a text invite different readings? Reader point of view provides one answer. Readings change when conducted from a particular perspective. A feminist might, for example, see Becky as the victim of a chauvinist society and be more sympathetic than the canon of scholarship. In and of themselves, different perspectives and goals alter a reader's perceptual processes and recall (Frederiksen 80). Objective agreement about textual content and meaning is, therefore, necessarily limited to explicit statements and the reasonable inferences made about any text.[2] From the standpoint of interactive research, a text consists of *explicit assertions and logical implications about these assertions* as assessed by a community of readers. But readings will differ among different linguistic, ethnographic, and historic communities.

TEXTUAL MEANING AND READER PROCESSING

Propositional analysis seems to be a key to unlocking the puzzle of how we can make assessments of the relationship between disparate reader processing and textual meaning. Propositions (after Fillmore) are idea units of the text. These units can reflect the four tasks that are essential for conceptualizing coherent reader processing: propositions can be aligned with textual main topics or with details of those topics; they can be assigned hierarchical relationships (properties, causes, sequences); they can account for reader inferences not explicitly stated in the text; and they can distinguish between ideational and syntactic complexity. In short, propositions can represent the conceptual core of textual assertions and their implications.

Although used in both L1 and L2 reading research, concepts of propositions vary. Gagné characterizes propositions as units conveying an idea (the man) and a complete idea (the man fixed the tire); each complete idea has *arguments* (the man) and *relations* (fixed the tire). Others call these same components *topics* and *comments* (Kintsch & van Dijk), implying that the proposition represents the reader's perception rather than the actual text language ("some guy" rather than "the man"). If the propositions are text-based, text-linguists use the terms *themes* (man) and *rhemes* (fixed the tire). Both themes and arguments can have different functions within a sentence and are not synonymous with a sentence *subject* (Vipond: 277). Most important, not all propositions are equal. Results of analysis vary, depending on how propositions are defined and weighed in relative importance (as macro- or micropropositions).

If connected coherently by the author, important ideas or macropropositions create a text's *schema.* Propositions relevant to textual schema are usually recalled better (by a factor of two or three) than propositions that are not (Kintsch & Keenan; Meyer 143). However, how a reader schematizes will depend on that individual's goals. When a reader's objectives ("this is what I want to find out") align with the textual presentation, he assigns textual propositions to appropriate categories of "gist" and "de-

tail." The reader's sort of gist and detail is called a macro-operation (Kintsch & van Dijk: 373). When the reader's goals are vague or the text lacks coherency (explicit or implicit), schemata are likely to be random, macro-operations unpredictable, and the reading outcomes "haphazard" (p. 374). Under such circumstances Becky Sharp might become a poor dear instead of a selfish opportunist. Comparing reader recall of a text with an analysis of its weighted propositions can reveal which students' systematic readings prove haphazard and which are justified by the text.

Interactive Processes. Propositional analysis helps pinpoint different readers' interactions with a text. Although several different interactive models have been proposed, they share the same processing components. They all account for feedback between features and agree that, to comprehend, the mind: 1) selects input (monitor or executive function); 2) processes familiar letters and words automatically (automaticity function); 3) recognizes linguistically marked relationships (surface language processing); 4) infers relationships not tagged by language; and 5) synthesizes the text's discourse with the reader's logical and affective judgments.[3]

In addition to mental processes, demographic factors (e.g., age, sex, background) and environmentally induced factors affect reading style (e.g., text external noise, perspectives, text type). Often relationships between variables emerge only after they are subjected to complicated statistical analyses. Both L1 and L2 researchers now commonly examine the following: *affect* (how I like this teacher, class, text), *background* (linguistic and personal), *metalinguistic intuitions* (this sounds right), *verbal intelligence, non-verbal intelligence, field independence,* and *field dependence* (analytical versus global problem solving), reader *goals* (reading to learn, reading for pleasure, reading for specific information), *language aptitude, first and second language proficiencies* in various skills. The importance of one component varies with its relationship to the others.

Problems in Assessing Interactive Variables. Thus while interactive models of reading have far greater descriptive flexibility than their simpler theoretical predecessors, this flexibility creates difficulties in assessing reading research (M. Adams: 202). If research is to inform us about how to optimize interactive reading, it needs to account for many variables. In one L2 study, for example, Carrell (41) concluded that, unlike native readers, non-native readers exhibited no significant effects of prior knowledge when they recalled a passage in the second language. To assess this conclusion, Lee (128) replicated the study, but asked students to use their *native* language in writing recalls of what they had read. Lee's findings differ from Carrell's, showing more interaction between topic familiarity and clear context (both top-down processes). Apparently, in these two experiments, language of recall changed style of recall. In this way the research design, in and of itself, alters results.[4]

The major caveat for practitioners: be critical readers. Even when we lack expertise in statistics, we can still look closely at studies to see how comprehension is defined and what learning will result. For example, we need to know the weighting and design of a cloze test or a recall protocol before deciding about the validity of the resulting data. Was the native or non-native language elicited (the former asking for reader language as well as reader concepts)? Was reading timed or untimed (the latter giving students more "learning" opportunities)? Were perspectives or reader background assessed (thereby isolating important non-linguistic variables)? Are samples of the evaluative or training instruments provided in the report (so that we can judge for ourselves how tasks are defined)? *We need to look not for pieces, but for how the pieces fit.*

Impact of the Interactive Model. That one strong interactive component can compensate for a weaker one is evident in L2 as well as L1 research (Wolff: 217, 218). Knowing a lot about baseball (top-down reader schema) minimizes the effect of proficiency differences in reader language (Levine & Haus). Recognizing story scripts (familiar episodic structure) facilitates vocabulary recognition (S. Adams). Students who get high scores reading familiar material may fail to do as well in unfamiliar subject areas (Koh). These findings suggest that limited command of language is not an insurmountable barrier to L2 reading and that our students can use texts to learn both language and subject matter.

SCHEMATIZING AND LEARNING

Schema research demonstrates how the mind

acquires new knowledge from existing information (Ausubel). To comprehend a text, a reader's personal schemata must interact with that of a text. To schematize, readers must: 1) intend to do so; 2) be able to relate new meanings to what they already know. The more links between new and previously acquired knowledge, the greater the "depth of processing," the stronger an assumed memory trace (Craik & Lockhart). Familiar schemata, then, increase the likelihood that a text will be remembered. As is the case in L1 studies, we know that L2 students who are taught relevant schema (experiencing Halloween before reading a passage about it) will have improved their comprehension and recall (Johnson: 106). We conceptualize the schematic structure of a text by linking it to our own preexisting cognitive structures or schema.

Anderson, Jarvella (102, 103), and Kintsch (113) have all shown how prior knowledge accounts for the fact that we remember the "gist" of a text, even though we are unable to replicate sentences. We rarely preserve the verbatim (surface) language originally used to impart that information (Bransford, Bransford *et al*). Recall protocols of foreign language students reveal that students can often recognize words, yet seriously misread or misconstrue their meaning within different contexts. Bernhardt's data suggest such misreadings have a conceptual rather than linguistic origin (27). And whereas native language students often revise their misunderstandings of semantic detail on continued reading (Garner & Reis), L2 students, according to Bernhardt's protocols, fail to repair initial misconceptions as readily. Apparently initial misreadings disrupt because a false start distorts "gisting" of the subsequent text.[5]

Conceptual Versus Lexical Decisions. Whether appropriate or inappropriate, schematically driven conceptualizing seems to overrule word recognition (lexical meaning) for foreign language readers. Recall protocols suggest that familiar cultural schema can be more powerful than lexical knowledge. For example, one of Bernhardt's subjects recalled *Wald* (woods) correctly in one passage, but encoded it as *world* in another. Given a new context, this person reconceptualized the *Wald* of *Waldkrankheit* (sickness of the forest) as *Weltkrankheit* or sickness of the world (26: 26–27). Schema theory can account for this behavior. While Germans frequently talk and write about sick woods, Americans more typically associate illness with people, not forests.

Every L2 study published confirms the theory that familiarity with schema will facilitate reading comprehension (Steffensen *et al.;* Koh; Levine & Haus). Prior familiarity with subject matter enhances language recognition, concept recall, and inferential reasoning.[6] Moreover, the more sophisticated that knowledge, the higher the comprehension. Such work has naturally led L2 teachers to assume that presentation of background information in prereading will have enhancement effects (Swaffar: 195; Meledenz *et al.*). However, more research on how to activate prior knowledge is needed (Johnson: 106; Hudson).

The Schemata of Text Structure. Aside from the usefulness of schema for concept learning and recall of informational details, L1 research by Meyer (143, 144), Kintsch (113), Mandler and Johnson, Rumelhart (171), and Thorndyke points to a link between high recall of story structure and the episodes within that structure. Research in schematic structure reveals that we tend to remember story sequences. Although text-based (Mandler: 207), structural regularities in stories enhance reader conceptualization. Recall is higher when a reader attributes a fact to a particular episode. These effects are significant in L2 reading as well as L1 (Walters & Wolf).

Carrell (43) assessed the effects of explicit expository organization (collection, description, causation, problem/solution, and comparison) for L2 students. Based on Meyer and Freedle's native reader experiments, this research used selections with different rhetorical cues connecting otherwise identical paragraphs.[7] The relationship between rhetorical features and comprehension in Carrell's results was statistically significant. She found (p. 456) higher mean recall scores for texts with explicit comparison, problem/solution, and causation statements than for the descriptive passage. The evidence suggests that different rhetorical organizations in a text result in different L2 student recall performance.

L2 research in listening comprehension of lectures suggests that making metapropositions or important transition points explicit enhances comprehension in and of itself. Chaudron and

Richards used "macro-markers" (p. 126) that connected the L2 listener with textual schemas ("as you may have heard," "one of the problems was"). Listening comprehension was measurably enhanced for the macro-marker group. The L1 reading studies of Frederiksen (79, 80), Meyer and Freedle, and the L2 work of Carrell (43, 44) bear out such assumptions. These studies, like that of Chaudron and Richards, all use "doctored" texts. Authentic texts rarely have consistent macro-markers. Without clear macro-markers, a reader's organization of textual coherencies results from inference rather than explicit textual assertions. Consequently, L2 researchers suggest that L2 students can benefit from learning strategies for assessing coherence (implicit connections) as well as cohesion factors (explicitly stated connections).

Reader Schema and Rater Assessments. Recall protocols reveal how a reader constructs coherencies between features of text structure. A particular weighting of macro- and micro-information in recall protocols presumes a preferred reader conceptualization. Yet when researchers weight all propositions equally, textual representations have equal value. Only when macrostructures are weighted more heavily than micro-structures is the reader's recall of gist and detail represented. Increasingly, L2 research weights propositions (Bernhardt: 29).

Connor used Meyer's (143) weighting system to compare the differences in recalled propositions between L1 and L2 students. She examined whether the quantity and value of recalled propositions would vary with three language groups and whether the recall of superordinate and subordinate propositions would be attributable to first language backgrounds. Her ranking system revealed no significant difference in the recall of superordinate ideas among natives and non-natives. However, in the realm of subordinate ideas, native English speakers excelled.

Carrell (43) analyzed protocols to see whether ESL readers conceptualized text structure. She found that only twenty-one of her eighty subjects used the logical organization of the text (as cause/effect, problem/solution, etc.) in their own immediate recall and tended to forget it in a delayed recall. These data contrast with native reader recall of text organization, which increases incrementally with age and academic level. Findings show ninth-graders utilizing the text structure of the original passage forty-six percent of the time in their first recalls (Meyer *et al.*), junior college students fifty percent of the time (Meyer: 144), and graduate students approximately sixty-eight percent of the time (Meyer & Freedle). In all such native reader studies, positive effects are noted consistently for students who recognize and organize their recalls using the text's discourse structure.

Connor's data can be read in two ways. Because a text-based rating scale for text structure was used, the higher native speaker recall suggests that either background schema or language ability enhances recall of subordinate idea units. Allowance for reader-based logic might change these findings. Connor's weighting assumes a reading (Meyer & Freedle) that views the passage as a collection of descriptions about fat people.[8] Other organizational schema could be applied, however. If, for example, the reader chooses to apprehend the text information as problems/impact of problems, then many propositions in Connor's subordinate category are raised to a superordinate status. A collection schema could be replaced by one of cause/effect. In such a reading, effects would be main idea units rather than subordinate ones. Flexibility in accounting for several acceptable ways to structure gist and detail could acknowledge *reader* as well as *rater* concepts of text structure.

The issue here is the extent to which variance in describing and weighting patterns of propositions focuses on the researchers' rather than the readers' configurations. After all, we want to understand the L2 readers' conceptual encounter with the text, not that of the evaluators.

Processing Styles Revealed in Oral Interviews. Along with the recall protocol to establish what the student remembers after reading, interviews conducted while students read have been useful in uncovering comprehension processes. Three variants in goal characterize oral interview studies.

First, an interview can assess reader strategies. An early researcher in L2 strategies, Hosenfeld (99) asks students to think aloud while reading. The interviewer responds to pauses or breakdowns in student processing with open-ended prompting ("does that word remind you of another word you've seen in this

passage?"). The think-aloud can be in the first or the second language. The decision is the students'. However, to a degree Hosenfeld's findings are the result of an interviewer's guidance. Because Harri-Augstein and Thomas passively observe reading rate, pauses, tendencies to look back or stop for note taking, or reflection through the use of a machine, their approach appears to look at what readers do rather than at what they can be encouraged to do. Harri-Augstein and Thomas urge that students need to develop personal reading models and individual (rather than teacher-guided) metalanguage for implementing them (p. 276). Their data show impressive gains in L2 reading comprehension as a result of tutoring after initial assessments.

Second, an interview can assess strategy learning. In such research students are provided with either L1 or L2 metalanguage (e.g., "what does this word refer to?") and are trained to look for specific features of both gist and detail. They are sometimes given assistance on request while reading aloud or given tests in which they specify what strategies were used to arrive at which answers. Performance prior to and after training can then be compared. Established practice in L1, such research is just commencing in L2 (see Levine & Reves; Hamp-Lyons below).

Third, an interview can identify reader perspective. The two foregoing techniques guide reader attention toward text. To uncover the style of reader attention, in this third version the oral interviewer asks only what the reader is thinking about when pauses occur. The technique reveals the objectivity with which the reader approaches the text. It is also used to study the ESL student's writing process (Raimes).

Block examined the reading perspectives of nine ESL students who performed poorly on the college's reading proficiency test.[9] She had two objectives: 1) to provide a detailed description of the comprehension strategies used by ESL students designated as non-proficient readers; 2) to compare poor reader styles in L1 and L2. Block's participants reported what they were thinking while reading. They were not to explain or analyze their thoughts. The investigator asked questions about what readers were thinking when they were quiet for a long period of time, but did not prompt a strategy response (p. 472). She coded two main reading modes. One was a style revealing the reader's affective and personal relationship to the text (i.e., "Crying babies. Boy does my little brother cry a lot!"). She called such readers "nonintegrators." The other style reflected on the reader's "understanding the ideas of the author, not on relating the text to themselves."[10] Such readers she called "integrators."

When the nine participants retook a skills test one-half year later, it was the three integrators who improved their scores significantly. The other six did not (pp. 483–84). Moreover, the three integrators, each with a different language background, passed their writing class that semester. As found in previous work by Benedetto and Hudson, language background failed to play a decisive role. Block concluded that the three readers who became more proficient did so because they "applied information or experience from their own lives to the information in the text" (p. 486). Whereas nonintegrators reacted unilaterally to the text, integrators conducted bilateral exchanges between text and personal meanings.

Processing Style and Language Background. Possibly data on perspective might shed light on Carrell's (43) analysis of both overall performance (discussed above) and the comparative performance of four language groups: Spanish, Arabic, Asian, and Other (predominantly Malaysian) students. She found that the positive effects of the logical text structures (i.e., causation, contrast, problem/solution) and the collection structure differ significantly between groups. In support of her findings are indications that the usefulness of text structure for L2 readers is a cultural issue. While metacognitive logic may be common to us all, different cultures seem to emphasize different aspects of logic in their written and verbal discourse. Recent research on contrastive rhetoric (Hinds) establishes that the discourse patterns of texts in languages such as Japanese and Arabic differ from common patterns in English. Yet Block's work suggests that strategies may be individual, not necessarily culture-bound. Before generalizations can be made, we need to know more about how formal schema affect different audiences.

Perhaps we can teach students to encode un-

familiar discourse patterns. Support for this assumption comes from research with Hebrew speakers who were taught reading strategies as a feature of their English lessons. Levine and Reves showed that an experimental group of fifty-nine students improved their reading scores by forty percent following ten weeks of instruction. The control group of seventeen students improved also, but by only six percent.[11] The authors concluded that formal training in L2 reading skills aids students whose languages are not West-European. These findings suggest that readers benefit from learning to recognize features of formal discourse regardless of their linguistic background. While text processing may be language specific, differences can be offset through strategy training. Unfortunately, the Levine and Reves study fails to provide us with information about either the measures for devising and evaluating strategies or the actual metalanguage students used.[12]

Schema and Learning: The Balance Sheet for the Classroom. The foregoing research gives clues about how we can help students improve their comprehension. The research literature suggests four approaches. First, reader use of background and text schema improves text comprehension and recall. Like L1 research, claims must be linked to test design. Without special strategy training, the native language of the reader is a significant variable. Positive results from strategy training suggest that the problem may be one of attention style rather than lack of familiarity with a particular discourse mode. In short, while recognition of text discourse structure appears to be a cultural variable (Carrell: 43), practice with appropriate reader perspectives can minimize such differences (Block; Levine & Reves).

Second, the foregoing suggests that metacognitive abilities, that is, universal rather than cultural thought patterns, may be essential to comprehension. Possibly classroom practice and reader protocols should assign value to any student perception of textual organization that reflects the passage's macro-relationships.

Third, reader protocols demonstrate how, at both the micro and macro level, faulty processing results in misreadings by L2 students. Available research data argue for schema-sensitive text selection (so that the subject matter and its presentational structure are accessible to students) and for prereading (to insure appropriate reader decisions from the beginning of a passage).

Fourth, in addition to content schema, Carrell's L2 research shows how explicit textual logic (cause/effect, comparison, problem/solution) enhances recall over neutral descriptions. As well as arguing for teaching recognition of discourse logic, such findings suggest an additional L2 readability factor: texts with analytic rather than descriptive organization (Carrell: 43).

In this section we have looked at schematizing or "top-down" processing. In the section that follows, the focus will be on verbal mechanics, or "bottom-up" processing. The research discussed looks at how problems in language competency can, in and of themselves, inhibit reading comprehension. In other words, we are asking to what degree top down factors such as background and formal schema can aid students with limited language proficiency. There seems to be no question that L2 students rely more heavily on these factors than do native language readers (Wolff: 217, 218). Yet inadequate command of vocabulary and grammar may well interfere with reader conceptualizing. Familiar topics and good reading strategies aside, how much language ability is required before the reader can construct a coherent representation of a text's gist and detail?

LANGUAGE COMPETENCY AND INTERACTIVE PROCESSES

We know very little about how inadequate command of L2 affects reading comprehension. We rely on theory about the mind's limited processing capacity. Psychologists have suggested that unfamiliar language and schema necessitate "controlled processing," cognitive attention that intrudes on our limited memory capacity (Shiffrin & Schneider). Whereas in L1 we process familiar words automatically, in an L2 our cognitive attention is more often on unfamiliar word meanings rather than connecting concepts. When a non-native reader has limited command of text language, presumably insufficient cognitive attention is available for schematizing and resultant comprehension.

At one extreme this theory implies that successful reading in L2 can only result after freedom from language mechanics. Readers must

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have a particular degree of language competency before they can allocate attention to context factors and the "chunking" or "nucleation" (after Pike) presumed necessary for recall. This interpretation raises the question: can automatic processing occur without a degree of L2 competency? Those who answer "yes" presume that reader interaction with the text is inhibited by low levels of language mastery.

Recently, the psychologist Cheng challenged Shiffrin and Schneider's "controlled processing" theory.[13] Applying Cheng's theory that "improvement in performance can sometimes be due to a restructuring of the components of the task so that they are integrated and reorganized in new ways" (p. 109), McLeod and McLaughlin compared the error patterns of native speakers with those of the beginning and advanced ESL readers. Using two measures, a cloze test and a miscue analysis of oral reading, they discovered that although advanced ESL students made significantly fewer errors on both tests, the pattern of their errors on the miscue test was the same as that of beginning ESL students. Whereas native speakers made *meaningful* errors three-fourths of the time (i.e., reading "dimes" instead of "money"), nonnatives did just the reverse. The authors hypothesize that for the advanced ESL students, as for the beginners, faulty strategies resulted in inefficient processing. Non-natives were decoding surface language rather than interacting with the text.

McLeod and McLaughlin looked at the relationship between readers' strategies (top-down factors) and recognition of letters, individual words, or morphological forms (bottom-up factors). Some studies attempt to establish "cutoffs" between a student's command of L2 vocabulary and syntax on the one hand and the ability to read, listen, write, or speak on the other. This research, often referred to as "threshold studies" in the literature, tends to focus on *text* or *language* product rather than *reader* processing.

Vocabulary. Vocabulary problems represent great stumbling blocks to fluent reading. Is there a point at which, exclusive of other factors, insufficient vocabulary precludes even ballpark guessing and, as a consequence, any top-down processing?[14] Opinions differ regarding the amount of vocabulary necessary to read, how much of that lexical access can be "passive" (for recognition only), and how to go about learning it (Meara, Cowie). The structuralist legacy, emphasizing surface syntax, deemphasized vocabulary until the late sixties (Bolinger). For L2 teachers, the assumptions of that legacy are with us still today. Saragi, Nation, and Meister suggest that students need 3600 forms with a "far higher number of meanings" in order to read unsimplified material in English. Even then the reader confronts a dozen or more unknown words per page (p. 72). Similarly, Ostyn and Godin cite claims that a 1500- to 2000-word vocabulary (the goal of most elementary two-year L2 sequences) is inadequate for reading authentic texts. They posit that a minimum of 5000 words is essential. Such thinking is supported by Tarnóczi whose research disputes the assumption that a 2000-word vocabulary will enable understanding of seventy-five percent of most texts.

Even higher estimates are conceivable if register, i.e., text-specific vocabulary, is taken into account. Register studies show that vocabulary varies widely from one work to another.[15] The research literature has investigated two ways to learn vocabulary: learning lists of lexical items (dictionary definitions) and indirect learning of words within a context.

Relationship between Beginning Language Instruction and Direct Vocabulary Learning. Cogent arguments for list or word pair learning (L2 word with L1 translation) are often made. From the standpoint of interactive processing, however, studying vocabulary as such obscures the dynamics of conceptualizing patterns of meaning. However, we know some rote techniques enlarge vocabularies. Nation summarizes studies demonstrating an average of learning as high as 166 words per hour (pp. 16–17). Numerous studies have been undertaken to assess efficient ways of optimizing word pair learning.[16]

As yet, vocabulary identified or recalled on the basis of story or passage reading has not been compared to equivalent time spent in word pair learning. Current L2 assumptions stem from L1 research that has established high correlatives between extensive reading and vocabulary level or demonstrated how particular instructional approaches enhance vocabulary building in a reading context (Hague; Sternberg *et al.*). All we know at present about

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learning L2 vocabulary in lists are the competency parameters: pronounceability enhances recall (Rodgers), as do self-generated associations whether visual or acoustic mnemonic aids (Cohen & Aphek); imposed images are useful for children but the reverse is true for adults (Pressley) or must be used with caution (Omaggio: 158); cognate study aids readers (Lobo, Seibert); even long lists (several hundred words) can be acquired and a large number of lexical meanings recalled (Lado *et al*); when words to be learned are nouns or adjectives, retention is higher than for other parts of speech (Rodgers); visual presentations of vocabulary enhance the comprehension of beginners and intermediate readers, but not that of advanced readers (Hudson).

The vocabulary learned in elementary instruction and that needed for reading may differ qualitatively. The requisite 2000 words found in beginning textbooks deal predominantly with tangible experience that can be confirmed in movement or manipulation of objects (Asher, Glisan). In beginning learning, such mapping remains ostensive, i.e., objects or actions appear to correspond with particular verbal signs (vocabulary). Reality, not discourse, defines vocabulary. At the onset of reading, however, this equation relationship (word = specific correlation) changes. Definitions become verbal.[17] Like language rules, vocabulary needs to be comprehended in natural communication.

This assumption is supported by the work of Vigil, who compared the use of authentic and edited texts in a Spanish program at a community college. Assessing two first semester classes of twenty adults each, she conducted pre- and post-tests of all four skills. Vigil found the experimental class had significantly higher reading comprehension scores on post-tests and compared favorably on written and oral proficiency measures as well. Her results are notable because she looked at the impact of a text variable on the overall performance of beginning students. Most reading research to date has focused only on the advanced learner.

Indirect Vocabulary Learning. In a study of intermediate level students, Guarino and Perkins' contextual research with ESL readers suggests that nonlexical factors (from reader world knowledge to discourse grammar knowledge) may be equal to or more significant than vocabulary (p. 28), a conclusion supported by others (Floyd & Carrell; Hudson). Apparently, using a polyseme, that is, conceptualizing a word with several meanings in one particular way, involves recognizing that definitions depend on context. A dictionary definition is often inadequate for this particular reading task. Bernhardt's subjects who translated *Wüste* as "desert" rather than "wasteland" illustrate the problem (27). Since the language of texts is often metaphorical (the dark continent as opposed to the dark night), meanings are obscured unless readers learn to recognize semantic extensions of words (their polysemes).

Vocabulary Acquisition through Extensive Reading. L1 research shows unequivocally that ease of recognition of a word is influenced by its frequency of occurrence (Rubenstein *et al*) and by the context in which it appears (Tulving & Gold). Does extensive reading increase vocabulary for the non-native reader? One problem facing researchers of extensive reading in L2 is ascertaining which words students already know. To eliminate this variable, Saragi, Nation, and Meister tested L2 readers' recognition of 241 *nadsat* words, Anthony Burgess' slang words invented for the novel *A Clockwork Orange.* The average *nadsat* word is repeated fifteen times in the novel, but some occur more frequently than others. The book has approximately 60,000 words. Subjects were not told in advance that they would be tested on vocabulary. Ninety *nadsat* words, which reflected the range of occurrence frequency, were put in a multiple-choice test with four English word choices. The median results were seventy-seven percent correct, indicating that students learn words incidentally through extensive reading.

Unfortunately, the study fails to provide data about reader constraints (e.g., time allotment, reader goals), student language competency, or their prior familiarity with the subject matter. Moreover, the novelty of *nadsat* words may have heightened reader attention and, consequently, enhanced recall artificially. This study supports, but does not completely substantiate, the notion that extensive reading helps students acquire extensive vocabulary.

Data from L2 studies of vocabulary gains from reading longer texts (e.g., in excess of

5,000 words) should be distinguished from vocabulary research on short texts (300 words or two to three paragraphs). Such brevity necessarily relocates a reader's encoding concerns from apperception of macro- to microstructures. Moreover, the short passages used in most studies lack repetition of vocabulary and elaboration of schemata. Kintsch and van Dijk find that L1 studies examining immediate recall of short paragraphs look at the readers' subprocesses (p. 392). Such experiments yield more detailed recall (micro-processing) because macro-processes play only a minor role. Consequently, short text studies highlight the effects of lower level context as well as the comprehension of micropropositions.

Vocabulary Studies and Shorter Texts. In a short text study without recall protocols, Bensoussan and Laufer gave sixty students from parallel English classes a list of seventy words to translate into their native tongue, Hebrew. A week later, students received a clean copy of the same list and a 574-word text containing these words. In order to confirm whether or not prior exposure to the word list contaminated later encoding, an additional control group of thirty-five students saw the word list only with the context passage. Comprehension questions at the end of the passage verified general understanding. No significant differences between the two groups were found.[18]

The researchers found indirect contextual clues (e.g., contrasts, collocations) for only twenty-nine of the seventy words in the passage. Of the remaining forty-one words, clear clues (e.g., explicit definitions, illustrations) were found for only thirteen. Of the total forty-one possible, then, students made use of contextual clues for only seventeen or twenty-four percent of the total seventy words. The authors concluded (p. 22) that, although results were statistically significant, context showed limited practical value for vocabulary acquisition.

Since Bensoussan and Laufer had students match vocabulary with definitions rather than encode from the passage, the study examined a language learning task (Nation). The use of a word list would discourage the very contextual guessing the authors sought to assess. In other studies, context training improved student effectiveness in interpreting the meanings of words found in texts (Seibert; Laufer & Sim).

In an analysis suggesting priorities for training in contextual guessing, Bensoussan looked at data from several context studies in light of discourse factors. She diagnosed semantic misreadings of students at both macro- and microstructural levels. At one text's macro level, the examples cited show how the reader failed to utilize schema: *cried* (out) becomes *wept* instead of *yelled.* Good natured requests became commands or hostile acts (p. 402). Similarly, Bensoussan found students' failure to identify correctly the sex of the speakers (macro-semantics) caused low level misreadings as well. Such effects of faulty interaction between gist and detail perception correspond to Sim's findings that L2 readers' failure to recognize sentence connectors (*since, while, nevertheless*) inhibited their understanding of the larger context.

Semantic Fields Versus Lexical Precision. Researchers in L1 propose we resolve the context/list learning debate by grouping words according to their semantic relationships (Johnson & Pearson). When taught semantic fields, the students learn to recognize a generic meaning for an unfamiliar word in context. A reader who associates "coach" with "mode of transportation" can continue reading the gist of a Cinderella story even though nuances of style and the image of a horse-drawn carriage are lost.

Crow's word field approach encourages students to learn general rather than specified meanings. For example, a teacher rewards students who recognize that "ugly" and "uncomely" convey a similar concept without asking them to know which one of these words best describes a displeasing appearance, rough weather, or an unpleasant disposition. In a recent study of advanced ESL students, those taught semantic field recognition developed receptive control of twice as many words as those using list and synonym learning techniques (Crow & Quigley). Crow concludes that if our teaching and testing practices distinguish between learning words as members of a larger schema rather than as synonyms or dictionary definitions, we can accelerate our students' acquisition of a passive reading vocabulary.

Just how do dictionaries and glosses affect reading? Bensoussan, Sim and Weiss conducted three studies on the use and non-use of dictionaries on students' performance on L2 reading tests. Dictionary access failed to alter

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performance on test scores. Apparently, taking words from their context fails to promote the interactive process. Johnson compared a group which had reference to glosses with one that did not. The group *without* glosses displayed superior comprehension and recall. Johnson conjectures (p. 514) that glossing may have encouraged word for word reading with attendant detriment to conceptualizing.

Eye Movement. Along with vocabulary studies, eye movement research reveals how a reader processes particular vocabulary or structures in a text.[19] This research measures what the eye fixates on and for how long (relative significance) or at what point regressive reading occurs (processing difficulty). We know from L1 studies that readers of English seem to attend to content words over eighty-three percent of the time and function words only thirty-eight percent or less than half of the time (Carpenter & Just: 40), that reading difficulty is reflected in reading rate, and that different reader objectives (e.g., learning versus pleasure reading) predict different rates (Anderson & Armbruster). Initial L2 research in eye movement suggests these parameters may be dissimilar in several important respects.

Bernhardt (28) assessed eye movements of native and non-native speakers reading edited and unedited texts which were graded as easy and difficult. She used three groups of students: inexperienced L2 readers, experienced L2 readers, and L1 readers. Their performance on three short texts was analyzed for differences in fixation frequency, fixation duration, percentage of regressive fixation, and reading speed in conjunction with the effects of repetition. Her quantitative conclusions support L1 models: inexperienced readers need more processing time overall. Moreover, their fixation durations suggest that inexperienced readers need significantly longer to sample information from the text. Unlike both other groups, the inexperienced readers failed to adjust their processing time (and presumably their processing strategy) in the passages. Long sampling time implies that working memory is overloaded. Beginners must analyze individual words and structures, functions that have become automatic for the more experienced reader. Presumably, slow reading correlates with lower comprehension because attention to letters and words inhibits reader attention to conceptual and schematic information. A number of L2 studies have concluded that inadequate command of language increases reliance on graphic information and inhibits use of effective reading strategies (Clarke: 52, 53; Alderson: 5).

The fact that Bernhardt's (28) inexperienced group maintained the same eye tracking strategy in texts of variable difficulty suggests an inflexibility noted in the conclusions reached in other L2 research (Harri-Augstein & Thomas). The recourse to poor strategies characterizes L2 reading performance. Comparing good and poor L1 readers, Clarke found that differences between them were greatly reduced in the foreign language. As expected, poor readers continued to engage in ineffective strategies. Unexpectedly, good L1 readers used poor reader strategies in the second language. Clarke concluded that "limited control over the language 'short circuits' the good reader's system" (53). Bernhardt's (28) inexperienced readers were probably "short-circuited" in Clarke's sense. They had a maximal comprehension rate of only thirty percent as opposed to a minimal rate of eighty percent in the other two groups. Neither Clarke (52, 53) nor Bernhardt (28) looked at possible effects from reader background and strategy training on "threshold" levels. Consequently, their results tell us what happens with low reader capability in L2, but not about how to correct the problem.

Language Thresholds for Reading? To examine the possibility of a language threshold for reading comprehension, Laufer and Sim compared language ability, reading performance, and strategy use (p. 409). In a pilot study, they determined that first-year students who scored below sixty-five percent on their EFL class grade could not "handle an academic text" (p. 408). A correspondence between grade level, achievement on a reading section of the Cambridge First Certificate in English, and an in-house interview (oral and written) led Laufer and Sim to conclude that there is probably a cut-off point for teaching reader strategies. At lower limits ("thresholds"), top-down processes fail to compensate for language problems. The authors predicted that strategy training would be useful only for those students with scores higher than seventy percent on a test such as the Cambridge exam.

With competency tests based on the ACTFL guidelines such as those developed by Dale Lange and colleagues at the University of Minnesota, the results of the Haifa study may be replicated and confirmed or disconfirmed for languages other than English. If so, such studies should include information about reader background. To assess the student input (Shahomy), we need to know whether students tested have training in strategies and extensive reading practice prior to taking these exams; whether or not textual subject matter is familiar to readers and whether texts other than those of an "academic genre" (Laufer & Sim: p. 407) produce different results. Bernhardt (29), for example, suggests that text content and the native language of the reader may be more important than language proficiencies.

Thus far, no threshold studies analyze interactive factors with statistical cross-correlations. We know that statistical measures can sometimes reveal or eliminate apparent differences in raw data (Oller). As a case in point, Lee designed a study to assess whether "the comprehension of a particular linguistic structure [the subjunctive in Spanish] is necessarily a function of prior instruction in its form and uses or if comprehension can be achieved without the benefit of such instruction" (130: 51). The author compared 180 students from twelve different classes. Half the students, the pre-instructional group, were in first-semester Spanish. The post-instructional group had been taught the subjunctive and were drawn from second-semester classes.

Lee looked at data from five assessment tasks: modified cloze passage, recall in Spanish and English, and probe questions in Spanish and English. Sources for texts and scoring are described and an adapted sample passage appended. Scoring measured propositions containing the subjunctive forms. Hence, morphological errors were not counted in scoring the cloze test. The data from all five answer groups were submitted to Analysis of Variance (ANOVA) followed by Tukey's test for the Honest Significant Difference (HSD). Lee found that Tukey's HSD revealed an absence of significant differences in performance between the pre- and post-instruction groups (p. 54). He concluded that "*perhaps foreign language teachers have been underestimating learners' comprehension because of the way they have been assessing it*" (p. 55). It would be interesting to know whether or not similar statistical analyses would modify Laufer and Sim's conclusions about reading thresholds.

Strategy Training and Success in Reading. Studies of intermediate students indicate that training in strategies improves reading scores. In a longitudinal study involving twenty-four ESL students, Hamp-Lyons conducted two, semester-long classroom treatments of reading (two hours weekly). Enrollment in these courses required a TOEFL score of 500–550. Hamp-Lyons matched three groups on the basis of pretest scores to compare effects of a "traditional" and a "text-strategic" classroom approach. She compared two classes having traditional formats with one text-strategic group. In the former she emphasized having students replicate discrete information from the text as well as formal grammar features at the sentence level; in the latter, she encouraged reading for a range of responses, emphasizing text schema and discourse features. All groups used the same anthology and completed the same fifty-word fifth-word deletion cloze test prior to and after completion of instruction. Scores revealed significant gains by the text-strategic group. Although it had the lowest pre-test mean, the experimental section outperformed the control groups in the post-test.

Using a narrower strategy and only one week of five one-hour sessions, Carrell (44) conducted a study with twenty-five high-intermediate proficiency ESL students. She compared training and non-training in recognition and use of text structure. The experimental group (fourteen ESL students) received one week of training in recognizing structure; the control group (eleven ESL students) performed various linguistic operations with the texts, for example, grammar exercises, sentence analysis, and vocabulary work (p. 736). The sole difference between classroom treatments, then, was that the control group received no training on top-level rhetorical organization and the strategy for using that information for reading and recall. The experimental group, on the other hand, had less time for linguistic operations on textual detail. Each group took pre- and post-tests that were scored for high-, mid-, and low-level idea units. Whereas pre-test scores were similar, post-test results for the experimental group yielded significantly higher

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Carrell's data (43, 44) lend notion of "text-strategic" empha features and main meaning. Ho Hamp-Lyons both worked wit had high-intermediate proficien together with the Laufer and strategy evidence suggests two inferences for classroom practic hand, if low threshold preclud comprehension, language train in word and sentence processin On the other hand, the case ca threshold difficulties provide reason for activating those strate reading memorable for the adu tainly the L1 evidence about ad tive processing (Palinscar & Br Brown) fostering reading compr to be further explored for L2 re interest also plays a role in interest factor may explain Vigi cess with first-semester Spanish used authentic texts than with the which used edited passages writte guage.

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scores for all levels of idea units recalled, a remarkable result. In view of the training difference, one would anticipate a gain in low level ideas for the control group, since they received more training in linguistic detail. A post-test, conducted three weeks after the reading, showed training effects carried over to the experimental group.

Carrell's data (43, 44) lend support to the notion of "text-strategic" emphases on discourse features and main meaning. However, she and Hamp-Lyons both worked with students who had high-intermediate proficiency. Considered together with the Laufer and Sim study, the strategy evidence suggests two quite different inferences for classroom practice. On the one hand, if low threshold precludes L2 reading comprehension, language training or training in word and sentence processing is indicated. On the other hand, the case can be made that threshold difficulties provide all the more reason for activating those strategies that render reading memorable for the adult reader. Certainly the L1 evidence about adult metacognitive processing (Palinscar & Brown; Baker & Brown) fostering reading comprehension needs to be further explored for L2 readers. Student interest also plays a role in learning. The interest factor may explain Vigil's greater success with first-semester Spanish students who used authentic texts than with the control group which used edited passages written to teach language.

When Floyd and Carrell assessed the impact of schemata on a language variable (syntactic complexity) they found that the experimental group with exposure to schema had significantly higher scores on both an objective test and written recalls. Since the control group read the syntactically simpler version of the same topic, these results suggest that schemata taught in the classroom can render linguistically complex passages accessible to students.

As studies comparing the interaction of student schema, metacognitive strategies, and low language competency are undertaken, guidelines are emerging for instructional approaches to *reader-* as well as *text-based* variables. The contradictory results in studies dealing with the effects of bottom up variables can be attributed in part to whether or not the research design weighs the reader variable. Here are some cases in point.

Content or Function Words: Data with and without Reader Processing. Ulijn, testing Dutch readers learning English, found that conceptual knowledge in conjunction with word knowledge was the critical factor in comprehension. He concluded that concepts resulting from content words (nouns, verbs, adjectives, and adverbs) were more significant than function words (prepositions, pronouns, conjunctions, and auxiliary verbs). These findings seem to contradict research in discourse markers which suggests that function words are essential in identifying cohesion in texts. The critical difference in these results may be in how the data are gathered. Bensoussan and Sim (p. 182) analyzed 103 multiple choice questions designed to test whether students scored higher on questions about function words (i.e., the discursive function of "as a matter of fact" as contradiction, elaboration, agreement) than on questions about content words (i.e., the meaning of "climate"). They used a noncloze test because they wanted to examine lexical skill, recognition, and decoding rather than the discursively driven encoding assumed for cloze tests.[20] Function words proved as difficult to identify as content words.

Bernhardt's eye tracking experiments (28) corroborate the findings of Bensoussan and Sim. Both native and non-native readers in the eye movement study fixated regularly on function words, particularly in more difficult tests. Moreover, native German readers (as opposed to experienced non-natives) tended to devote more attention to function words in a phrase than to the content words in the same phrase. The group of inexperienced readers, on the other hand, attended primarily to content words. Since English language studies of eye movement show experienced readers emphasize content, this contrast suggests that the two languages call on two different reading behaviors. In German, function words may affect comprehension in a totally different way than in English. Possibly optimal processing strategies vary between languages.

Semantics Versus Syntax: Background and Research Design Variables. Since function words mark cohesion in written texts, these studies bear directly on the controversy over the relative meaningfulness of semantics (content words) over syntax. Reconsider Ulijn's findings in terms of the conceptual impact Meyer and Carrell

document for the reader who identifies text structure. The technical texts used by his students have an organization favorable to contextual guessing of structure (Bramki & Williams). Connective features found in a clear rhetorical organization are easy to encode. The emphasis of Ulijn's subjects on semantics may have resulted from their familiarity with this text type's macrosyntax. Subjects may, however, have had inadequate background familiarity to predict semantic meanings. The background in formal schema could have compensated for deficient language competency in decoding syntax, but not for deficient semantic proficiency.

Cooper examined the performance of practiced and unpracticed non-native readers of English, i.e., those who had pursued their previous education through the medium of English and those whose prior education had been in their native Malaysian tongue. The practiced readers were at a significantly higher proficiency level. The testing instrument was language- and text-based. It looked at a variety of semantic (i.e., non-contextual affix identification, contextual identification of hyponymy, synonymy, or antonymy) and syntactic variables (i.e., cleft construction, complementation, cohesion markers, and awareness of logical relationships between sentences). Items asked students to match one of four possible answers to different cues, i.e., possible synonyms, an italicized or deleted word from a single sentence, the selection of one of four clauses appropriate to complete a series of statements.

In analyzing his data, Cooper found that all item types discriminated between practiced and unpracticed readers. Performances on the multiple sentence section revealed the sharpest discrimination. The author concluded that unpracticed readers were particularly uncertain about the meanings of sentence connectors (p. 132). To glean additional information, Cooper asked unpracticed readers to list unfamiliar words in a text and discovered that a high proportion were common across subject areas. What is striking about the list he provides is that many are discursive connectors (*despite, nevertheless, consequently*) or introductory markers of macropropositional logic such as *contrast with, similarly, function as, characterize* (p. 133). For this reason Cooper concludes that classroom training in identifying these connectors in reading passages should help unpracticed readers understand and "create" coherent text relationships (p. 135).

These results call into question the L1 theory that, for comprehension processes, language grammar is less crucial than vocabulary. Do listeners and readers "bypass much of it" (Rivers: p. 4) through recourse to semantic strategies? Mounting evidence suggests that syntax and semantics cannot be considered separately. Berman compared the impact of simplified and more complex syntactic relationships in an otherwise similar text to discover whether understanding of gist and detail would be the same. Two groups of ten Hebrew-speaking college students read a version of a short passage (300 words) and answered thirty questions. The multiple choice section of the test asked ten questions on factual details, five on pronominal reference, and five on overall ideas. Ten questions were open-ended and students could answer in Hebrew. The relatively fewer factual errors made by those readers who used a syntactically simplified text led the author to conclude that for "acquisition of specific information accurately and in detail . . . exact appreciation of syntactic components of each sentence" (p. 146) is desirable.

In research on the interaction betweeen syntax, lexica, and recall of short French texts (600 to 650 words), Barnett examined syntax and vocabulary as independent factors in a rational deletion cloze test.[21] Recall scores obtained from English protocols were then factored as a dependent variable. Her subjects were 124 intermediate college students.

Barnett found that recall increased according to both vocabulary *and* syntactic proficiency. In other words, results showed parallel effects. Students with either low vocabulary scores or those students with low syntax scores were unable to increase abilities in the contrasted domain. In both instances recall scores were consistently low. Therefore, she concluded that for these French students "knowledge of syntax and vocabulary interact to allow a reader to understand a text" (p. 347), a finding supported by Twyford's work with beginning students of Italian. Barnett's data also shed light on the issue of whether or not cloze tests are more closely related to tests of grammar (intrasentence only) than to tests of reading comprehension (intersentence). Apparentl
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IMPLICATIONS FOR THE CLA

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L1 and L2 Recall: Two Proficiencies? One question lurking in all of the foregoing studies is how decoding language affects a reader's encoding of concepts. Testing L2 versus native language recall on 320 learners of Spanish, Lee (127) found that recall protocols written in English contained more propositions about the passage than those written in Spanish. His work in this area has led him to conclude that "assessing comprehension with a target language task may limit learners' ability to demonstrate what they comprehended" (128: p. 353).

The notion that conceptualizing may be more accurately represented in native language use is confirmed independently in other studies. Tan and Ling report significant improvement, and hence a more accurate measure of understanding, with questions in the mother tongue, Bahasa Malaysia. Such findings suggest that test construction needs to weigh priorities. Should we test in the native language for conceptual processing, in L2 for language recall, or both? While use of English has persisted as a feature of sentence translation tests, test formats of communicative methods have featured the second language (e.g., Omaggio, 159: pp. 321–34). Findings, however, indicate that not only researchers but also we practitioners may want to weigh our L2 linguistic goals against the fuller assessment of reading comprehension revealed in native language answers.

IMPLICATIONS FOR THE CLASSROOM

At this point, amid a wealth of data about variables in reading comprehension, we return to the question posed at the outset of this paper: how do the insights about interactive processing apply to the L2 reader? Can any generalizations be made with regard to our teaching and evaluation of reading? What follows is my judgment about the significance of these studies, and the issues they raise for us as classroom teachers.

Issue 1: How Do We Teach Vocabulary? Threshold studies suggest that vocabulary building is an essential facet of proficient reading. At the same time, interactive research argues for the assumption that lexical lists fail to solve the reading vocabulary problem. The alternative has the reader build his or her own vocabulary. Several pragmatic reasons exist to engage students in this process. When the learner decides what is important to commit to memory, the salience and consequent retention is higher. Moreover, not all students need to learn the same words. Saragi *et al.* report on a vocabulary test based on 1000 most frequent English words. Analysis indicated that although the class average was eighty-nine percent on the exam, only forty percent of the words tested were known by every learner (p. 72). If word lists are made, then, it is probably students, not teachers, who need to identify the words they need to know.

The work of Crow stresses the value of contextual understanding, Bensoussan of uninterrupted reading for meaning. To link textual meaning and vocabulary, classroom presentations must look at discursive and thematic relationships rather than dictionary definitions (e.g., Grellet: p. 128; Nuttall: p. 64f.). Bensoussan's and Johnson's assessments of dictionary use and glosses indicate that, rather than extensive emphasis on such formats, our students may be better served by more pre- and post-reading vocabulary discussion that connects text and reader schemata (Johnson; Floyd & Carrell).

In-class vocabulary practice should ask students to find additional words that relate to the same semantic category (semantic fields or synonymy), identify how the same words are redefined by different contexts (polysemes), provide opportunities to increase awareness of pronounceability, and identify affixes, suffixes, or parts of speech. Good vocabulary exercises, then, represent strategies for vocabulary monitoring and repairing misreadings. To facilitate recall, we must link vocabulary to macro meaning factors: to familiar schema, to a topic of student interest (reader-based macro-factors), to text structure, and to gist (text-based macro-factors).

Issue 2: What is the Role of Syntax? Interactive research expands our current focus on syntax within sentences to include intersentence and interepisodic text levels. Cooper, Bensoussan, and Sim have demonstrated the significance of student recognition of logical connectors. While Bernhardt's eye movement studies (28) of German, French, and Spanish native language

readers suggest that the relative concentration on function words may differ from one language to another, additional time devoted to ends of clauses and sentences was significant in all cases. Because modifiers and logical connectors are among the vocabulary items least easily guessed in context, yet essential for accurate text reconstruction (Bensoussan & Laufer), they must be taught, particularly in prereading exercises. And since intersentence connectors identify relationships between macro- and micropropositions, they are most logically discussed as links between high-, mid-, and low-level text structure ("find words that tell you what follows is a result of what has gone before"). In building mental representations of text structure, L2 readers need syntactic cohesion factors to connect semantics (see Mackay & Mountford's taxonomy, pp. 129–30).

Issue 3: How Do We Uncover Reader Conceptualization? As recall protocols and oral interviews illustrate, we frequently fail to appreciate that students arrive at aberrant textual reconstructions in perfectly reasonable ways (e.g., a child may match "fly" and "elephant" after seeing *Dumbo*). Differences in background knowledge may lead to logical inferences that teachers, lacking those data, judge incorrect. Interactive research suggests that some misapprehension of textual meaning is a common phenomenon in any language.

To prevent discouraging students on the basis of aberrant reconstructions and to repair misreadings, we must create a non-judgmental environment in which readers have opportunities to explain decisions about meaning. As was true for successful reading perspectives (Connor, Block), topic oriented verbalization styles promote learning (Michaels, Kramsch). Strategy work in small groups can help students verbalize links between the text topic and what they understand of it: which events in the story lead readers to draw inferences and conclusions. Instead of judging those conclusions, readers and teachers need to focus on the process of understanding and the concepts resulting from that process.

Indications about the greater comprehension and recall when the native language is used (Lee; Tan & Ling) prompt reconsideration of native language use in reading and testing of reading. For the past forty years, from the days of audio-lingual precepts to Krashen's "input hypothesis" (122), the notion that maximal exposure to the second language fosters comprehension has dominated at least the theory if not always the practice in our discipline. Proficiency-oriented approaches such as those described by Omaggio (159) and the reading formats illustrated in the comprehensive exemplifications of Nuttall and Grellet stress text-based models designed to elicit second language use. Proponents of general language proficiency argue that a price paid in reading comprehension is compensated for in language learning. On the other hand, successful readers also increase their language learning (Oller). Occasional use of L1 in outside reading, small group work, and testing may teach more L2 in the long run.

In a communicative program L1 use would be an incidental check of student conceptualizing and strategy practice, not translation. Translating, because it involves surface mapping between languages, generally fails to activate reader conceptual processes. On the other hand, research seems to suggest that native language recalls enhance comprehension and help identify conceptual problems, e.g., the misreading when *cried* is translated *wept* and not *called out.* To find out whether language interferes with how our students comprehend a text, we need to test and compare formats that use both L1 and L2.

Issue 4: How Does Reading Interact with Other Competencies? The answer seems to depend on the type of text used. Vigil's comparison of readers of authentic and edited texts revealed significant differences not only in the reading comprehension, but also in composition and oral performance at the end of an eleven-week course. "The results suggest that learners exposed to language structures in the context of authentic text develop the skill to produce language coherently rather than as isolated components of the language" (pp. 100–01). As would be expected with texts emphasizing command of surface language, the group using edited texts made fewer errors in spelling and concordance. This correspondence between type of reading material and learner processing suggests that text factors do have an impact on overall language learning.

Issue 5: Can We Use Computers to Teach Interac-

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tive Reading? Students like computers, and as software technology develops, a partial burden of language practice can fall to them (Holmes & Kidd; Wyatt). To practice reading, software must interact with the user, providing immediate explanations for inaccurate decisions. A recent study by Kleinmann reports no differential effects among classrooms with and without CAI components. He hypothesizes that, for CAI to be an effective adjunct to reading, the current drill-practice and tutorial software needs to be replaced with materials providing comprehensible input, i.e., user feedback about conceptual meaning (p. 271).

Relatively sophisticated software that provides feedback on reader processing may soon become available. Ahmad's group (4) discusses how to create and use applications. David Clarke describes a computer-assisted reading skills course, *Textexplore,* currently being developed in England. User files keep a continuing record of which sections have been completed, together with results. Students preview texts (selecting multiple choice items with feedback on correct as well as incorrect answers), practice scanning and speed reading (activating a timer while taking the test), practice identifying macropropositions (choosing an idea statement on the basis of its relevance in a particular paragraph), and conduct vocabulary and cohesion exercises. Users select the vocabulary they want to learn and choose from an array of options (context, definitions, guessing procedures, etc.).

Issue 6: Does Interactive Research Affect Current Definitions of Readability? Computer programs that account for the interaction of top-down and bottom-up factors point to current thinking about assessing readability. Most readability scales heretofore have emphasized language features such as sentence length and vocabulary difficulty. Now we know that background, discursive, and motivational factors must also be weighed. Features we often fail to notice, such as factual inconsistency, can hinder memory (Zabrucky). How do classroom teachers judge text selection in light of research theories that are still evolving (Stein; Schallert *et al.*)?

Coherence counts. Schema research commenced with studying ambiguous passages in which writers or storytellers failed to specify whether a fight was verbal or physical or which event was being celebrated and why. These are the text types to avoid. Similarly, texts that leap from personal stories to factual analyses or from one situation to the next are hard to understand, particularly if students lack background knowledge to fill in the gaps. What we as teachers need to do with our reading assignments and with our test construction is to monitor texts for stylistic factors that make reading hard. We must also teach students to identify non-linguistic as well as linguistic text features that inhibit comprehension.

Issue 7: How Can We Evaluate Interactive Reading? The research presented here calls many of our current testing practices into question. Our tests generally fail to account for interactive variables such as: 1) reader background; 2) different language skills (see Canale on including comprehension and production items); 3) the text's macropropositions (topics, text logic) and micropropositions (their detailed elaboration); 4) different types of texts tested in different ways (for learning, for locating gist on the one hand or particular information on the other). In their format, reading tests rarely vary in question type. They provide true/false or multiple choice answers but rarely incorporate several styles of cloze, open-ended questions, or recalls. Only this item variety lets us diagnose problems, enabling students to show us *why* they understood a text in a particular way.

Issue 8: How Can We Teach Components of Interactive Reading? The interactive model has shown not only the reader's but also the *teacher's* role to be of greater significance than has been thought up to now. Rather than monitors of performance, L2 teachers who want their classes to interact with texts have to be facilitators of the reading process. Theirs is a fourfold task: 1) to activate reader schemata; 2) to guide students to awareness of text structure; 3) to assist in strategy development; and 4) to promote relaxed interaction between students and text. Beyond these four functions, the teacher's problem is to choose tasks for different students' backgrounds and language competencies. Drawing on the research discussed here, I suggest the following.

First, in view of the evidence that reader L1 strategies are often not applied in L2 reading, I suggest reading of authentic texts from the

start of language instruction for the sole purpose of training in gist comprehension or top-down processing. Periodic practice could offset the dominance of word for word decoding tendencies that result from initial language learning practices. Students need practice using schema as a strategy in lieu of language capability. They also need practice reading for gist or partial comprehension, a reality training to encourage continued effort. Often the gist of L2 texts that deal factually with popular and well-known topics (travel, films, music, television, reports of current events) is intelligible to elementary learners. This kind of practice teaches students that not all L2 texts are equal, that their own interests foster a higher degree of comprehension for some types of reading than for others.

Second, we need information about students' backgrounds and interests to select texts for L2 reading. At the very least it would be useful to know what our students would like to read. From a commercial perspective, anthology editors might do well to consider market research. What are the interests and text preferences of the teachers and the students who will be the prospective audience?

Third, experiments with as little as one classroom week of intensive strategy practice and accompanying metalanguage have yielded significantly improved reading.[22] It seems self-evident that we introduce this activity in our classes. We may also wish to consider tutorial work with our weaker readers based on oral interview techniques. If we lack the time, student tutoring might prove effective. Feeny (73), for example, reports high vocabulary learning resulting from student team teaching.

Fourth, previewing work to establish the content and logical organization of the text is essential. Since recognition of schema enhances both comprehension and recall, the case for prereading cannot be overstated. Bernhardt's (27) examples of the enduring effects of initial misreadings show how important it is to help students avoid faulty constructions.

Fifth, students need to identify middle level or episodic structure, e.g., changes in scene or time, sequence developments, or shifts in perspective. Being aware that such changes will occur, either through a prereading exercise or assignment questions, can aid processing significantly. Baten, using Thorndike's L1 research, compared eight presumably similar texts of L2 for organizational features (e.g., structural ties between propositions, numbers of restatements, etc.) rather than structural features such as sentence length. He found that logical reorderings (negative effect) and thematic consistency (positive effect) distinguish between the easy and the difficult text groups (pp. 144–46). If such middle level coherence and cohesion interference problems are recognized in advance, reader attention can be released to concentrate on other processing.

Sixth, L1 research in directing reader attention (Frederiksen 79: Schallert) can be applied to rereading tasks and thereby reinforce both the language and ideas of the text. Once readers have completed an initial reading, they can be asked to reread from another point of view (e.g., as burglars, policemen, or home owners) or another structural logic (problems and solutions instead of comparisons). Such activities treat comprehension as a fluid process, rather than as a particular result. They also provide a language review within a novel conceptual frame.

Seventh, since affect and text-extrinsic perspectives can distort comprehension (Block), students should be encouraged to synthesize textual facts and assertions as neutrally as possible. However, this practice applies only to their initial reading. After constructing textual meaning, students learn by taking issue with textual ideas. Differences of opinion provide opportunities to bridge the gap between comprehension and production, particularly in small group practice.

CONCLUSION

If L2 readers are to participate actively in identifying cultural and author codes[23] they must use texts for the total language learning process: 1) for text-based comprehension (of new information, of logical systems, of differences in meaning found in different language use, of author perspective); and 2) for reader-based articulation of individual understanding of schema, details, and a variety of perspectives that may or may not correspond to those of the author. In short, interactive reading is an integral part of communicative language learning. Consider the processes that must be practiced and assessed. Prereading reviews language. In asking students to decide what the text is about

(text schema) and what they
subject (reader schema), the
dents practice language in co
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In curriculum planning, rea
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NOTES

[1]I wish to thank my University
Katherine Arens, Elaine Horwitz,
their editorial reading and suggestio
paper. My thanks as well to the Univ
tute at the University of Texas for
enabled me to work on this project

[2]The critical debate on textual mea
tionality is a paper in and of itself. Br
Critics Beardsley and Wimsatt deplo
common practice in both positivism
text interpretations emanating from
about or experienced with regard to h
argued for text-intrinsic readings, insi
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to assessments of tone and authorial
in the choice and arrangement of te
structure. This view is the fundamen
theoretical discussions. Critical dive
how to assess words and structures (
in Tompkins).

[3]For analysis of L1 models, see
Kamil; for L2 models, see Nagle &
(27).

[4]So can statistical analyses. For
conducted a reanalysis of research
unitary hypothesis claim. Reassess

(text schema) and what they know about this subject (reader schema), the teacher has students practice language in context. Strategies reinforce discourse gambits. To learn strategies, students need to articulate their processing in an L2 metalanguage, thinking aloud about how understanding is achieved. Instead of labeling answers "right" and "wrong," the interactive class emphasizes expanding what the reader knows. Reading becomes a reasoning task connected to a language task.

In curriculum planning, reading for different purposes becomes increasingly important. Like L1 learners, L2 students need reading for many reasons: to learn specific facts, to be entertained, to get the gist, to interpret author intent, and to locate cultural messages. To afford the necessary practice, curriculum planners need to make early use of a variety of texts and language levels. In the future we may well be asking students to do extensive reading on a longer text or in a particular field of study, because a restricted textual schema and a limited semantic field seem to ease the L2 reading task. The practice of independent reading as early as the third year in high school or second-year college courses will probably become more common.

Finally, there are implications for the language teacher's role in a department. Just as literary criticism, L2 reading research in the past decade has stressed the society's or the reader's meaning options rather than those of the text or of an "informed" professor. We have some things to talk about with our colleagues in literature and language studies. In view of our shared premises about meaning and the reader role, language departments now have opportunities for coherent programming and teaching practices between language levels: The earlier use of authentic texts in the elementary program, the broader definition of literature to include cultural and historical readings in elementary as well as advanced work, the shared concern for developing metacognitive interpretive abilities, can result in integrated curriculum planning. Our "language" and "content" schism within the profession can be addressed.

NOTES

[1]I wish to thank my University of Texas colleagues Katherine Arens, Elaine Horwitz, and Dolly Young for their editorial reading and suggestions for improving this paper. My thanks as well to the University Research Institute at the University of Texas for the released time that enabled me to work on this project.

[2]The critical debate on textual meaning and author intentionality is a paper in and of itself. Briefly, in the fifties New Critics Beardsley and Wimsatt deplored the then relatively common practice in both positivism and *Geistesgeschichte* of text interpretations emanating from what the author said about or experienced with regard to his or her writing. They argued for text-intrinsic readings, insisting that the text must speak for itself and that the reader's job should be limited to assessments of tone and authorial objectives manifested in the choice and arrangement of text words and narrative structure. This view is the fundamental position in current theoretical discussions. Critical divergence today concerns *how* to assess words and structures (see the range of theory in Tompkins).

[3]For analysis of L1 models, see De Beaugrande (66) or Kamil; for L2 models, see Nagle & Sanders or Bernhardt (27).

[4]So can statistical analyses. For example, John Carroll conducted a reanalysis of research that supported a strict unitary hypothesis claim. Reassessing results from cloze, multiple choice, repetition, interview, etc., test types, he illustrated that use of different coefficients and factoring modified the original study's findings. He concluded that similar analyses would modify findings in other published studies as well (p. 92).

[5]Bernhardt's reports of misreadings suggest ways in which semantic processing short-circuits language processing. Apparently, the physical representation of *Wüste* as *desert* can commence, in the mind of a reader, to alter the total gestalt (the macrosemantics) of the world described in the passage. Is a "desert," for example, on a continent or in a city (location); a permanent landscape feature or a recent phenomenon; an irrevocable problem or one that might be remedied? Bernhardt's data (24, 26, 27) reveal a consistent tendency on the part of L2 students to expand microsemantic decisions into conceptual macrosemantics.

[6]Often such studies recreate L1 research models to confirm their applicability to the L2 setting. Koh confirms for L2 reading Schmid's L1 findings on the impact of general background (science, business, liberal arts); Levine and Haus confirm that, as was the case for the L1 readers of Chiesi *et al.*, L2 familiarity with baseball enhances comprehension of a game description.

[7]Meyer calls these rhetorical predicates: "labels for relationships between content words in the text; they are not content words themselves" (Meyer 143: 41). These predicates are the explicit or implicit logic markers of formal textual organization. They tag the metasyntax of the text. In three of Carrell's four passages, these metasyntactical relationships were lexicalized as cohesion markers ("due to,"

"in contrast"). In the problem/solution passage, they were not. In this instance, the rhetorical predicate was implied by a response: introducing new parameters (solution) as a response to a situation (problem). I suggest that, for readers of West European languages, content words such as "problem" and "solution" are the conceptual equivalent of explicit rhetorical predicates in that their function is clearly defined in Western culture.

[8]Connor's superordinate propositions were: main topics (e.g., fat people), setting (American society), problems (discrimination, resultant degradation), and summary statements (mental pain surpasses physical problems). Subordinate propositions were: evidence or consequences of treatment (failure to get promoted, something wrong in this kind of society).

[9]All nine participants had similar scores on the reading exam and were given two cloze tasks prior to the interview. One was in English and one in the native language of the two non-native groups (three Chinese and three Spanish students). Recall was measured through retellings and a twenty-item multiple-choice test.

[10]Integrators tended to respond in the third person. Block divided strategies as follows: 1) a general category of comprehension-gathering and monitoring such as anticipating content, recognizing text structure, questioning information; and 2) a local strategy category in which the reader rephrased, reread or questioned the meaning of a word or clause. Each occurrence of a particular strategy was counted as one instance in the coding of protocol tapes by the researcher and two others.

[11]Subjects were all in the University's Advanced English courses and were not selected randomly. The author and topic of the two Hebrew texts selected were familiar to the subjects from their school studies. The text was followed by fourteen comprehension questions accompanied by a request that students identify what textual information led them to answer the way they did. Three sample answers are given but there is no appendix to indicate how strategies were evaluated, categorized, or grouped according to content. No recall protocols were used.

[12]To some extent, the absence of difficulties may result from the strategies students learned. We are told students received an English metalanguage description of reading strategies. Although the article provides no samples of this metalanguage, the authors, Levine and Reves, do state that "reference to discourse or syntactic clues found in the text were considered efficient strategies" (p. 333). We may infer, then, that the English cues included strategies such as "find words that suggest differences" or "find words that connect the thought of the sentence you are reading with the sentence preceding it." By the same token, it may be that the emphasis was on what discourse analysts would call micro- (sentence and intersentence relationships) rather than macro-strategies (main meaning, personal reaction). This would be an important feature to clarify. If micro-strategies were the main thrust of Levine and Reves' strategy teaching, their findings concerning L1 strategy carry-over would point in the direction of universal discourse features. For example, noting relations suggested by subordinating conjunctions or adverbial markers may be meaningful among structurally dissimilar languages.

[13]For their vehement rebuttal see Schneider & Shiffrin.

[14]Sciarone (pp. 51–52) claims that when fewer than ninety percent of the words are recognized, one's understanding overall is based on guesswork at the expense of precise understanding. However, he had subjects translate a cloze deletion to establish this claim. Multiple choice insertions rather than deletion of difficult vocabulary might have improved scores; see Crow.

[15]Most texts lack a high percentage of words in common. Even works by the same author may vary widely in vocabulary choice. Simmons found fewer than one-third of the words in three Schiller plays were in common (pp. 33–36). Salling's analysis of different English text types yielded somewhat narrower variations (densities from 1:2.6 to 1:9.8) with the caveat that unknown words tended to be low frequency and hence harder to guess and to remember (pp. 222–25).

[16]For an annotated bibliography of recent L2 vocabulary research, see Meara. Cowie's review of Meara's work offers a succinct interpretation of the implications of this research. Of the various mnemonic devices suggested for list learning, the keyword method has received perhaps the greatest L2 research attention.

[17]The notion that the word is a sign having a signifier (phonological and orthographic representation) and a signified (the definition and implications within a culture-bound system) goes back to de Saussure. Wittgenstein distinguishes between an ostensive definition (an apparent, but actually erroneous assumption of correspondence between a word and a referent in the real world) and a verbal one. Modern day semantics (e.g., Lyons) are concerned with the contextual variables that alter verbal meaning within a given discourse (the "Cinderella" of Grimm's fairy tales versus the "Cinderella" of presidential candidates).

[18]We are not told if the control group already knew any of the seventy words. If all seventy were unknown, this would mean over twelve percent of the words in the short passage were new, yet comprehension and encoding occurred.

[19]Research in reading rate or eye movements (eye tracking) has been used extensively for L1 models of bottom-up processing. Eye movements can be measured in voltage changes in light reflected into the eye of someone reading from a screen. Voltage signals indicate the direction and extent of eye movement, where the eye fixates spatially (rightward and down, leftward and up, back and forth). Monitors sampling voltage values 500 times per second can measure the length of time the eye stops, the fixation duration, as well as total reading speed. Computer programs convert voltage signals into numbers and calculate fixation positions, duration, number of regressions, and reading rate. The resultant calculations are concrete evidence of strategy shifts (Carpenter & Just 39).

[20]The common assumption that *nth* deletion cloze tests assess discourse rather than discrete point features is subject to dispute. Evidence for both sides has been propounded. For his research and critique of cloze as a grammar rather than a discourse test, see Alderson (4). Oller's rebuttal is incorporated in the same chapter and is a key issue examined in this anthology. The thrust of Alderson's argument is that a random *nth* word procedure should be abandoned

in favor of a deletion procedure based guage and language processing (4: 21 problems with validity and reliability (pp. 256–57).

[21]Although her sample distinguishe semantic items, Barnett groups them lary." Originally a three-factor analysi vocabulary, syntax, and story features ever, the story variable yielded no s and was discarded (p. 345).

[22]For a succinct research review e

BIBLIOGRAPHY

1. Adams, Marilyn J. "Models of *Comprehension*. Ed. Jean-Fra Kintsch. Amsterdam: North 206.
2. Adams, Shirley. "Scripts and familiar Vocabulary: Enhan Reading Skills." *Modern Lang* 155–59.
3. Ahmad, Khurshid, Greville Co & Roland Sussex. *Computers, Language Teaching*. Cambrid Press, 1985.
4. Alderson, John Charles. "The Proficiency in English as a Fo *in Language Testing Research*. E MA: Newbury House, 198
5. ———. "Reading: A Reading Problem?" *Reading in a Fo* Charles Alderson & A. H. U man, 1984: 1–24.
6. Allen, Virginia F. *Techniques* New York: Oxford Univ.
7. Allington, Richard & Micha Grapheme Substitutions in Reading Behaviors." *Visib* 285–97.
8. Anderson, Richard C. "Substa *Quarterly Journal of Experimen* 530–41.
9. ——— & James Pichert. "Re callable Information Follow tive." *Journal of Verbal Learni* (1978): 1–12.
10. Anderson, Thomas & Bonnie *Handbook of Reading Research* New York: Longman, 198
11. Asher, James J. "Comprehen dence from Laboratory and *Comprehension Approach to Fo* Ed. Harris Winitz. Rowley 1981: 187–222.
12. Ausubel, David. *The Psycho Learning*. New York: Grun

in favor of a deletion procedure based upon a theory of language and language processing (4: 213). For discussion on problems with validity and reliability of cloze, see Farhady (pp. 256–57).

[21]Although her sample distinguishes between lexical and semantic items, Barnett groups them together as "vocabulary." Originally a three-factor analysis of variance between vocabulary, syntax, and story features was conducted. However, the story variable yielded no significant differences and was discarded (p. 345).

[22]For a succinct research review emphasizing the need for schema and strategy practice in the classroom, see Zvetina.

[23]The articulate reader's perception of particular cultural and author codes corresponds to Chomsky's definition of *performance:* the actual process of sentence comprehension or production under the constraints of memory limitations, the reader's interest and motivation, shifts of attention or distractions (p. 9). The reading emphasis of structuralists has been on a "general language code" in the sense of Chomsky's definition of language *competence:* the speaker's abstract capacity to generate grammatical sentences.

BIBLIOGRAPHY

1. Adams, Marilyn J. "Models of Reading." *Language and Comprehension.* Ed. Jean-Francois Le Ny & Walter Kintsch. Amsterdam: North-Holland, 1982: 193–206.
2. Adams, Shirley. "Scripts and Recognition of Unfamiliar Vocabulary: Enhancing Second Language Reading Skills." *Modern Language Journal* 66 (1982): 155–59.
3. Ahmad, Khurshid, Greville Corbett, Margaret Rogers & Roland Sussex. *Computers, Language Learning, and Language Teaching.* Cambridge: Cambridge Univ. Press, 1985.
4. Alderson, John Charles. "The Cloze Procedure and Proficiency in English as a Foreign Language." *Issues in Language Testing Research.* Ed. John Oller. Rowley, MA: Newbury House, 1983: 205–17.
5. ———. "Reading: A Reading Problem or a Language Problem?" *Reading in a Foreign Language.* Ed. J. Charles Alderson & A. H. Urquhart. Essex: Longman, 1984: 1–24.
6. Allen, Virginia F. *Techniques in Vocabulary Teaching.* New York: Oxford Univ. Press, 1983.
7. Allington, Richard & Michael Strange. "Effects of Grapheme Substitutions in Connected Text upon Reading Behaviors." *Visible Language* 11 (1977): 285–97.
8. Anderson, Richard C. "Substance Recall of Sentences." *Quarterly Journal of Experimental Psychology* 26 (1974): 530–41.
9. ——— & James Pichert. "Recall of Previously Unrecallable Information Following a Shift in Perspective." *Journal of Verbal Learning and Verbal Behavior* 17 (1978): 1–12.
10. Anderson, Thomas & Bonnie Armbruster. "Studying." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 657–79.
11. Asher, James J. "Comprehension Training: The Evidence from Laboratory and Classroom Studies." *The Comprehension Approach to Foreign Language Instruction.* Ed. Harris Winitz. Rowley, MA: Newbury House, 1981: 187–222.
12. Ausubel, David. *The Psychology of Meaningful Verbal Learning.* New York: Grune & Stratton, 1963.
13. ———, Joseph Novak & Helen Hanesian. *Educational Psychology: A Cognitive View.* 2nd ed. New York: Holt, Rinehart, 1978.
14. Baker, Linda & Ann Brown. "Metacognitive Skills and Reading." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 353–94.
15. Barnett, Marva. "Syntactic and Lexical/Semantic Skill in Foreign Language Reading: Importance and Interaction." *Modern Language Journal* 70 (1986): 343–49.
16. Baten, Lut. "Text Comprehension: The Parameters of Difficulty in Narrative and Expository Prose Texts: A Redefinition of Readability." Diss. Univ. of Illinois, 1981.
17. Benedetto, Rosemary A. "A Psycholinguistic Investigation of the Top-Level Organization Strategies in First and Second Language Reading: Five Case Studies." Diss. New York Univ., 1984.
18. Bensoussan, Marsha. "Beyond Vocabulary: Pragmatic Factors in Reading Comprehension—Culture, Convention, Coherence and Cohesion." *Foreign Language Annals* 19 (1986): 399–407.
19. ——— & Batia Laufer. "Lexical Guessing in Context." *Journal of Research in Reading* 7 (1984): 15–31.
20. ———, Donald Sim & Razelle Weiss. "The Effect of Dictionary Usage on EFL Test Performance Compared with Student and Teacher Attitudes and Expectations." *Reading in a Foreign Language* 2 (1984): 262–76.
21. Berman, Ruth A. "Syntactic Components of the Foreign Language Reading Process." *Reading in a Foreign Language.* Ed. J. Charles Alderson & A. H. Urquhart. Essex: Longman, 1984: 139–56.
22. Bernhardt, Elizabeth. "Testing Foreign Language Reading Comprehension: The Immediate Recall Protocol." *Die Unterrichtspraxis* 16 (1983): 17–33.
23. ———. "Three Approaches to Reading Comprehension in Intermediate German." *Modern Language Journal* 67 (1983): 111–15.
24. ———. "Text Processing Strategies of Native, Non-Native Experienced and Non-Native Inexperienced Readers of German: Findings, and Implications for the Instruction of German as a Foreign Language." Diss. Univ. of Minnesota, 1984.
25. ———. "Reading in the Foreign Language." *Listening, Reading, Writing: Analysis and Application.* Ed. Barbara H. Wing. Middlebury, VT: NEC, 1986: 93–115.

26. ———. "Proficient Texts or Proficient Readers?" *ADFL Bulletin* 18 (1986): 25–28.
27. ———. "A Model of L2 Text Reconstruction: The Recall of Literary Text by Learners of German." *Issues in L2: Theory as Practice/Practice as Theory.* Ed. Angela LaBarca. Norwood, NJ: Ablex, forthcoming.
28. ———. "Cognitive Processes in L2: An Examination of Reading Behaviors." *Delaware Symposium on Language Studies: Research on Second Language Acquisition in the Classroom Setting.* Ed. James Lantolf & Angela LaBarca. Norwood, NJ: Ablex, 1986: 35–50.
29. ———. "Comprehension and Text Genre: An Analysis of Secondary School Foreign Language Readers." *Modern Language Journal* 72 (1988): forthcoming.
30. Block, Ellen. "The Comprehension Strategies of Second Language Readers." *TESOL Quarterly* 20 (1986): 463–94.
31. Bolinger, Dwight. "Meaning and Memory." *Forum Linguisticum* 1 (1976): 1–14.
32. Borland, Ron & August Flammer. "Encoding and Retrieval Processes in Memory for Prose." *Discourse Processes* 8 (1985): 305–17.
33. Bramki, Doudja & Ray Williams. "Lexical Familiarization in Economics Text, and its Pedagogic Implications in Reading Comprehension." *Reading in a Foreign Language* 2 (1984): 169–81.
34. Bransford, John. *Human Cognition: Learning, Understanding and Remembering.* Belmont, CA: Wadsworth, 1979.
35. ———, J. Richard Barclay & Jeffery Franks. "Sentence Memory: A Constructive versus Interpretive Approach." *Cognitive Psychology* 3 (1972): 193–209.
36. Brown, Ann. "Metacognition in Reading and Writing: The Development and Facilitation of Selective Attention Strategies for Learning from Texts. *Directions in Reading: Research and Instruction.* Ed. Michael Kamil. Washington: National Reading Conference, 1984: 21–43.
37. Burgess, Anthony. *A Clockwork Orange.* New York: Norton, 1963.
38. Canale, Michael. "Considerations in the Testing of Reading and Listening Proficiency." *Foreign Language Annals* 17 (1984): 349–68.
39. Carpenter, Patricia A. & Marcel Just. "Reading Comprehension as Eyes See It." *Cognitive Processing in Comprehension.* Ed. Patricia A. Carpenter & Marcel Just. Hillsdale, NJ: Erlbaum, 1977: 109–39.
40. ———. "What Your Eyes Do While Your Mind is Reading." *Eye Movements and Reading: Perceptual and Language Processes.* Ed. Keith Rayner. New York: Academic Press, 1983: 275–307.
41. Carrell, Patricia. "Three Components of Background Knowledge in Reading Comprehension." *Language Learning* 33 (1983): 183–207.
42. ———. "Schema Theory and ESL Reading: Classroom Implications and Applications." *Modern Language Journal* 68 (1984): 332–43.
43. ———. "The Effects of Rhetorical Organization on ESL Readers." *TESOL Quarterly* 18 (1984): 441–69.
44. ———. "Facilitating ESL Reading by Teaching Text Structure." *TESOL Quarterly* 19 (1985): 727–52.
45. Carroll, John. "Psychometric Theory and Language Testing." *Issues in Language Testing.* Ed. John W. Oller. Rowley, MA: Newbury House, 1983: 80–107.
46. Chaudron, Craig & Jack C. Richards. "The Effect of Discourse Markers on the Comprehension of Lectures." *Applied Linguistics* 7 (1986): 113–27.
47. Cheng, Patricia W. "Restructuring versus Automaticity: Alternative Accounts of Skill Acquisition." *Psychological Review* 92 (1985): 414–23.
48. Chiesi, Harry L., George J. Spilich & James F. Voss. "Acquisition of Domain-Related Information in Relation to High and Low Domain Knowledge." *Journal of Verbal Learning and Verbal Behavior* 18 (1979): 257–74.
49. Chomsky, Noam. *Aspects of the Theory of Syntax.* Cambridge, MA: MIT Press, 1965.
50. Clarke, David. "Computer-Assisted Reading—What Can the Machine Really Contribute?" *System* 14 (1986): 1–13.
51. ——— & I. S. P. Nation. "Guessing the Meanings of Words from Context: Strategy and Techniques." *System* 8 (1980): 211–20.
52. Clarke, Mark A. "Reading in Spanish and English: Evidence from Adult ESL Students." *Language Learning* 29 (1979): 121–50.
53. ———. "The Short-Circuit Hypothesis of ESL Reading—or When Language Competence Interferes with Reading Performance." *Modern Language Journal* 64 (1980): 203–09.
54. Cirilo, Randolph & Donald Foss. "Text Structure and Reading Time for Sentences." *Journal of Verbal Learning and Verbal Behavior* 19 (1980): 96–109.
55. Cohen, Andrew & Edna Aphek. "Retention of Second-Language Vocabulary over Time: Investigating the Role of Mnemonic Associations." *System* 8 (1980): 221–35.
56. Connor, Ulla. "Recall of Text: Differences between First and Second Language Readers." *TESOL Quarterly* 18 (1984): 239–56.
57. Cooper, Malcolm. "Linguistic Competence of Practiced and Unpracticed Non-Native Readers of English." *Reading in a Foreign Language.* Ed. J. Charles Alderson & A. H. Urquhart. Essex: Longman, 1984: 122–35.
58. Cowie, Tony. "Review of *Vocabulary in a Second Language.*" *Reading in a Foreign Language* 2 (1984): 198–205.
59. Craik, Fergus I. M. & Robert S. Lockhart. "Levels of Processing: A Framework for Memory Research." *Journal of Verbal Learning and Verbal Behavior* 11 (1972): 671–84.
60. ——— & Endel Tulving. "Depth of Processing and the Retention of Words in Episodic Memory." *Journal of Experimental Psychology* 104 (1975): 268–94.
61. Crow, John T. "Receptive Vocabulary Acquisition for Reading." *Modern Language Journal* 70 (1986): 242–50.
62. ——— & June Quigley. "A Semantic Field Approach to Passive Vocabulary for R sion." *TESOL Quarterly* 19 (19
63. Cziko, Gary A. "Language Com Strategies: A Comparison of Fi guage Oral Reading Errors." (1980): 101–14.
64. Daneman, Meredyth & Patrici vidual Differences in Working ing." *Journal of Verbal Learning* (1980): 450–66.
65. De Beaugrande, Robert. *Text, Toward a Multidisciplinary Scien* NJ: Ablex, 1980.
66. ———. "Design Criteria for Pro ing." *Reading Research Quarterly*
67. ———. "General Constraints o Language Comprehension." *hension.* Ed. Jean-Francois Le N Amsterdam: North-Holland,
68. Denhiere, Guy & Jean-Francois portance of Meaningful Unit and Recall of Narrative by C *Poetics* 19 (1980): 147–61.
69. De Saussure, Ferdinand. *Course* Trans. Wade Baskin. New Y 1966.
70. Eco, Umberto. *A Theory of Sem* Indiana Univ. Press, 1976.
71. Elley, Warwick B. "L2 Reading *Reading in a Foreign Language.* son & A. H. Urquhart. Esse 281–301.
72. Farhady, Hossein. "New Directio Testing." *Issues in Language Test* W. Oller. Rowley, MA: Ne 253–69.
73. Farr, Roger & Robert Carey. *Measured.* Newark, DE: Intern ciation, 1986.
74. Feeny, Thomas. "Vocabulary of Vocabulary Expansion." *F* 9 (1976): 485–86.
75. Fillmore, Charles. "The Case fo *Linguistic Theory.* Ed. Emmo Harms. New York: Holt, Ri
76. Flammer, August & M. Tau Reader's Perspective." *Disc* August Flammer & Walter K North-Holland, 1982: 219–3
77. Floyd, Pamela & Patricia Car Reading of Teaching Cultura *Language Learning* 37 (1987):
78. *Foreign Language Learning: A Resea* VanPatten, Trisha R. Dvor Rowley, MA: Newbury Hou
79. Frederiksen, Carl. "Acquisition tion from Discourse." *Journal Verbal Behavior* 14 (1975): 158
80. ———. "Processing Units in U *Discourse Production and Com* Freedle. Norwood, NJ: Able

to Passive Vocabulary for Reading Comprehension." *TESOL Quarterly* 19 (1985): 497–513.

63. Cziko, Gary A. "Language Competence and Reading Strategies: A Comparison of First- and Second-Language Oral Reading Errors." *Language Learning* 30 (1980): 101–14.
64. Daneman, Meredyth & Patricia Carpenter. "Individual Differences in Working Memory and Reading." *Journal of Verbal Learning and Verbal Behavior* 19 (1980): 450–66.
65. De Beaugrande, Robert. *Text, Discourse and Process: Toward a Multidisciplinary Science of Texts.* Norwood, NJ: Ablex, 1980.
66. ———. "Design Criteria for Process Models of Reading." *Reading Research Quarterly* 16 (1981): 261–315.
67. ———. "General Constraints on Process Models of Language Comprehension." *Language and Comprehension.* Ed. Jean-Francois Le Ny & Walter Kintsch. Amsterdam: North-Holland, 1982: 179–92.
68. Denhiere, Guy & Jean-Francois Le Ny. "Relative Importance of Meaningful Units in Comprehension and Recall of Narrative by Children and Adults." *Poetics* 19 (1980): 147–61.
69. De Saussure, Ferdinand. *Course in General Linguistics.* Trans. Wade Baskin. New York: McGraw-Hill, 1966.
70. Eco, Umberto. *A Theory of Semiotics.* Bloomington: Indiana Univ. Press, 1976.
71. Elley, Warwick B. "L2 Reading Difficulties in Fiji." *Reading in a Foreign Language.* Ed. J. Charles Alderson & A. H. Urquhart. Essex: Longman, 1984: 281–301.
72. Farhady, Hossein. "New Directions in ESL Proficiency Testing." *Issues in Language Testing Research.* Ed. John W. Oller. Rowley, MA: Newbury House, 1983: 253–69.
73. Farr, Roger & Robert Carey. *Reading. What Can Be Measured.* Newark, DE: International Reading Association, 1986.
74. Feeny, Thomas. "Vocabulary Teaching as a Means of Vocabulary Expansion." *Foreign Language Annals* 9 (1976): 485–86.
75. Fillmore, Charles. "The Case for Case." *Universals in Linguistic Theory.* Ed. Emmon Bach & Robert T. Harms. New York: Holt, Rinehart, 1968.
76. Flammer, August & M. Tauber. "Changing the Reader's Perspective." *Discourse Processing.* Ed. August Flammer & Walter Kintsch. Amsterdam: North-Holland, 1982: 219–38.
77. Floyd, Pamela & Patricia Carrell. "Effects on ESL Reading of Teaching Cultural Content Schemata." *Language Learning* 37 (1987): 89–108.
78. *Foreign Language Learning: A Research Perspective.* Ed. Bill VanPatten, Trisha R. Dvorak & James F. Lee. Rowley, MA: Newbury House, 1987.
79. Frederiksen, Carl. "Acquisition of Semantic Information from Discourse." *Journal of Verbal Learning and Verbal Behavior* 14 (1975): 158–69.
80. ———. "Processing Units in Understanding Text." *Discourse Production and Comprehension.* Ed. Roy Freedle. Norwood, NJ: Ablex, 1982: 57–87.
81. Freedle, Roy O. "Introduction to Volume I." *Discourse Production and Comprehension.* Ed. Roy O. Freedle. 2nd ed. Norwood, NJ: Ablex, 1982: xv–xix.
82. Gagné, Ellen. *The Cognitive Psychology of School Learning.* Boston: Little, Brown, 1985.
83. Garner, Ruth & Ron Reis. "Monitoring and Resolving Comprehension Obstacles: An Investigation of Spontaneous Text Lookbacks Among Upper-Grade Good and Poor Comprehenders." *Reading Research Quarterly* 16 (1981): 569–82.
84. Glisan, Eileen W. "Total Physical Response: A Technique for Teaching All Skills in Spanish." *Foreign Language Annals* 19 (1986): 419–28.
85. ———. "The Effect of Word Order on Listening Comprehension and Pattern Retention: An Experiment in Spanish as a Foreign Language." *Language Learning* 35 (1985): 443–72.
86. Goodman, Kenneth. "Decoding: From Code to What?" *Language and Literacy. The Selected Writings of Kenneth S. Goodman.* Ed. Frederick Gollash. Boston, MA: Routledge & Kegan Paul, 1982: 53–60.
87. Gough, Phillip. "Word Recognition." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 225–53.
88. Grellet, Francoise. *Developing Reading Skills. A Practical Guide to Reading Comprehension Exercises.* Cambridge: Cambridge Univ. Press, 1981.
89. Grimes, Joseph. "Narrative Studies in Oral Texts." *Current Trends in Textlinguistics.* Ed. Wolfgang Dressler. Berlin: de Gruyter, 1978: 123–32.
90. Guarino, Regina & Kyle Perkins. "Awareness of Form Class as a Factor in ESL Reading Comprehension." *Language Learning* 36 (1986): 77–82.
91. Hague, Sally A. "Vocabulary Instruction: What L2 Can Learn from L1." *Foreign Language Annals* 20 (1987): 217–25.
92. Halliday, Michael A. K. & Ruqaiya Hasan. *Cohesion in English.* London: Longman, 1976.
93. Hamp-Lyons, Liz. "Two Approaches to Teaching Reading: A Classroom-Based Study." *Reading a Foreign Language* 3 (1985): 363–73.
94. Harri-Augstein, Sheila & Laurie F. Thomas. "Conversational Investigations of Reading: The Self-organized Learner and the Text." *Reading in a Foreign Language.* Ed. J. Charles Alderson & A. H. Urquhart. Essex: Longman, 1984: 250–76.
95. Henning, Grant H. "Remembering Foreign Language Vocabulary: Acoustic and Semantic Parameters." *Language Learning* 15 (1973): 167–79.
96. Hinds, John L. "Contrastive Rhetoric: Japanese and English." *Text* 3 (1983): 183–95.
97. Hirsch, Eric Donald. *The Validity of Interpretation.* New Haven: Yale Univ. Press, 1967.
98. Holmes, Glyn & Marilyn E. Kidd. "Second-Language Learning and Computers." *Canadian Modern Language Review* 38 (1982): 503–16.
99. Hosenfeld, Carol. "A Preliminary Investigation of the Strategies of Successful and Non-Successful Readers." *System* 5 (1977): 110–23.
100. Hudson, Thom. "The Effects of Induced Schemata on the 'Short-Circuit' in L2 Reading Performance:

Non-Decoding Factors in L2 Reading Performance." *Language Learning* 32 (1982): 1–31.
101. Iser, Wolfgang. *The Act of Reading.* Baltimore: Johns Hopkins Univ. Press, 1981.
102. Jarvella, Robert J. "Effects of Syntax on Running Memory Span for Connected Discourse." *Psychonomic Science* 19 (1970): 235–36.
103. ———. "Syntactic Processing of Connected Speech." *Journal of Verbal Learning and Verbal Behavior* 10 (1971): 409–16.
104. Johns, Tim & Florence Davies. "Text as a Vehicle for Information: The Classroom Use of Written Texts in Teaching Reading in a Foreign Language." *Reading in a Foreign Language* 1 (1983): 1–19.
105. Johnson, Dale & P. David Pearson. *Teaching Reading Vocabulary.* New York: Holt, Rinehart, 1978.
106. Johnson, Patricia. "Effects of Building Background Knowledge." *TESOL Quarterly* 16 (1982): 503–15.
107. Juel, Connie. "Comparison of Word Identification Strategies with Varying Context, Word Type, and Reader Skill." *Reading Research Quarterly* 15 (1980): 358–76.
108. Just, Marcel & Patricia Carpenter. "A Theory of Reading: From Eye Fixations to Comprehension." *Psychological Review* 4 (1980): 329–54.
109. Kamil, Michael. "Current Traditions of Reading Research." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 39–62.
110. Kintsch, Walter. "Recognition Memory in Bilingual Subjects." *Journal of Verbal Learning and Verbal Behavior* 9 (1970): 405–09.
111. ———. *The Representation of Meaning in Memory.* Hillsdale, NJ: Erlbaum, 1974.
112. ———. *Memory and Cognition.* New York: Wiley, 1977.
113. ———. "On Comprehending Stories." *Cognitive Processes in Comprehension.* Ed. Marcel Just & Patricia Carpenter. Hillsdale, NJ: Erlbaum, 1977.
114. ——— & Janice M. Keenan. "Reading Rate as a Function of the Number of Propositions in the Base Structure of Sentences." *Cognitive Psychology* 5 (1973): 257–74.
115. ——— & Teun A. van Dijk. "Toward a Model of Discourse Comprehension and Production." *Psychological Review* 85 (1978): 363–94.
116. Kleiman, Glenn M. "Speech Recoding in Reading." *Journal of Verbal Learning and Verbal Behavior* 14 (1975): 323–39.
117. Kleinmann, Howard H. "The Effect of Computer-Assisted Instruction on ESL Reading Achievement." *Modern Language Journal* 71 (1987): 267–88.
118. Koh, Moy Yin. "The Role of Prior Knowledge in Reading Comprehension." *Reading in a Foreign Language* 3 (1985): 375–80.
119. Korjakovceva, N. F. "Zur Bestimmung der Niveaustufen der Lesefähigkeit in der Fremdsprache." *Deutsch als Fremdsprache* 15 (1977): 280–86.
120. Kramsch, Claire. *Discourse Analysis and Second Language Teaching.* Language in Education: Theory and Practice, 37. Washington: CAL, 1981.
121. Krashen, Stephen. *Second Language Acquisition and Second Language Learning.* Oxford: Pergamon, 1981.
122. ———. *The Input Hypotheses: Issues and Implications.* New York: Longman, 1985.
123. La Berge, David & S. Jay Samuels. "Toward a Theory of Automatic Information Processing in Reading." *Cognitive Psychology* 6 (1974): 293–323.
124. Lado, Robert, Beverly Baldwin & Felix Lobo. *Massive Vocabulary Expansion in a Foreign Language beyond the Basic Course: The Effects of Stimuli, Timing and Order of Presentation.* Final Report, Project No. 5-1095. ERIC Microfiche ED 013 046. Washington: US Dept. of HEW, 1967.
125. *Language and Social Identity.* Ed. John J. Gumperz. Cambridge: Cambridge Univ. Press, 1982.
126. Laufer, Batia & Donald Sim. "Measuring and Explaining the Reading Threshold Needed for English for Academic Purposes Texts." *Foreign Language Annals* 18 (1985): 405–11.
127. Lee, James F. "The Effect of Research Design on Free Written Recall as a Measure of Reading Comprehension in a Second Language." *TESOL Quarterly* 19 (1985): 792–93.
128. ———. "Background Knowledge and L2 Reading." *Modern Language Journal* 70 (1986): 350–54.
129. ———. "On the Use of the Recall Task to Measure L2 Reading Comprehension." *Studies in Second Language Acquisition* 8 (1986): 83–93.
130. ———. "Comprehending the Spanish Subjunctive: An Information Processing Perspective." *Modern Language Journal* 71 (1987): 51–57.
131. Le Ny, Jean-Francois, Maryvonne Carfantan & Jean-Claude Verstiggel. "Accessibility from Working Memory and Role of Reprocessing in Sentence Comprehension." *Language and Comprehension.* Ed. Jean-Francois Le Ny & Walter Kintsch. Amsterdam: North-Holland, 1982: 123–34.
132. Levine, Adina & Thea Reves. "What Can the FL Teaching Teach the Mother Tongue Reader?" *Reading in a Foreign Language* 3 (1985): 329–39.
133. Levine, Martin & George Haus. "The Effect of Background Knowledge on the Reading Comprehension of Second Language Learners." *Foreign Language Annals* 18 (1985): 391–97.
134. Lobo, F. A. "10,000 Spanish Word Vocabulary Expanded from 3,000 English Cognates." Diss. Georgetown Univ., 1966.
135. Lyons, John. *Semantics.* Cambridge: Cambridge Univ. Press, 1968.
136. Mackay, Ronald & Alan Mountford. "Reading for Information." *Reading in a Second Language.* Ed. Ronald Mackay, Bruce Barkman & R. R. Jordon. Rowley, MA: Newbury House, 1979: 106–41.
137. Mandler, Jean M. "Recent Research on Story Grammars." *Language and Comprehension.* Ed. Jean-Francois Le Ny & Walter Kintsch. Amsterdam: North-Holland, 1982: 207–18.
138. ——— & Nancy S. Johnson. "Remembrance of Things Parsed: Story Structure and Recall." *Cognitive Psychology* 9 (1977): 111–51.
139. McConkie, George W. & David Zola. "Language Constraints and the Functional Stimulus in Reading." *Interactive Processes in Reading.* Ed. Charles A. Perfetti & Alan M. Lesgold. H 1981: 155–75.
140. McLeod, Beverly & Barry Mc ing or Automaticity? Read guage." *Language Learning* 3
141. Meara, P. M. *Vocabulary in a Se Bibliography 3.* London: Cen Language Teaching and R
142. Melendez, E. Janc & Robert ing Schema Theory to Foreig *Foreign Language Annals* 18 (
143. Meyer, Bonnie J. F. *The Orga Effects on Memory.* New York
144. ———. "Reading Research Teacher: The Importance of *tion and Communication* 33 (
145. ———. "The Structure of Tex *Research.* Ed. P. David Pear man, 1984: 319–51.
146. ———, David M. Brandt & of Top-Level Structure in T Comprehension of Ninth-G *Research Quarterly* 16 (1980):
147. ——— & Roy O. Freedle. "Ef on Recall." *American Educati* (1984): 121–43.
148. Michaels, Sarah. "Sharing Ti tive Styles and Differential A *guage in Society* 10 (1981): 4
149. Miller, George A. "Dictionar *guage and Cognitive Processes*
150. Miller, James R. & Walter Ki Recall of Short Prose Passage sis." *Journal of Experimental P ing and Memory* 6 (1980): 3
151. ———. "Knowledge-Based As hension and Readability."
152. Morris, C. Donald, John D. Franks. "Levels of Processin propriate Processing." *Journ Verbal Behavior* 16 (1977): 5
153. Murdock, B. B. "The Retentio *Journal of Experimental Psycho*
154. Nagle, Stephen & Sara San Theory and Second Langua *Quarterly* 20 (1986): 9–16.
155. Nation, I. S. P. "Beginning to lary: A Review of the Rese (1982): 14–36.
156. Nuttal, Christine. *Teaching R Language.* London: Heinem
157. Oller, John W. "Evidence for a ficiency Factor: An Expect *in Language Testing.* Ed. Jo MA: Newbury House, 198
158. Omaggio, Alice C. "Pictures Comprehension: Do They *Annals* 12 (1979): 107–16.
159. ———. *Language Teaching in C Instruction.* Boston: Heinle,
160. Osgood, Charles. "Where do S

fetti & Alan M. Lesgold. Hillsdale, NJ: Erlbaum, 1981: 155–75.

140. McLeod, Beverly & Barry McLaughlin. "Restructuring or Automaticity? Reading in a Second Language." *Language Learning* 36 (1986): 109–23.
141. Meara, P. M. *Vocabulary in a Second Language. Specialized Bibliography 3.* London: Centre for Information on Language Teaching and Research, 1983.
142. Melendez, E. Jane & Robert H. Pritchard. "Applying Schema Theory to Foreign Language Reading." *Foreign Language Annals* 18 (1985): 399–403.
143. Meyer, Bonnie J. F. *The Organization of Prose and Its Effects on Memory.* New York: North-Holland, 1975.
144. ———. "Reading Research and the Composition Teacher: The Importance of Plans." *College Composition and Communication* 33 (1982): 37–49.
145. ———. "The Structure of Text." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 319–51.
146. ———, David M. Brandt & George J. Bluth. "Use of Top-Level Structure in Text: Key for Reading Comprehension of Ninth-Grade Students." *Reading Research Quarterly* 16 (1980): 72–103.
147. ——— & Roy O. Freedle. "Effects of Discourse Type on Recall." *American Educational Research Journal* 21 (1984): 121–43.
148. Michaels, Sarah. "Sharing Time: Children's Narrative Styles and Differential Access to Literacy." *Language in Society* 10 (1981): 423–42.
149. Miller, George A. "Dictionaries in the Mind." *Language and Cognitive Processes* 1 (1986): 171–85.
150. Miller, James R. & Walter Kintsch. "Readability and Recall of Short Prose Passages: A Theoretical Analysis." *Journal of Experimental Psychology: Human Learning and Memory* 6 (1980): 335–54.
151. ———. "Knowledge-Based Aspects of Prose Comprehension and Readability." *Text* 1 (1981): 215–32.
152. Morris, C. Donald, John D. Bransford & Jeffery J. Franks. "Levels of Processing versus Transfer Appropriate Processing." *Journal of Verbal Learning and Verbal Behavior* 16 (1977): 519–33.
153. Murdock, B. B. "The Retention of Individual Items." *Journal of Experimental Psychology* 62 (1961): 618–25.
154. Nagle, Stephen & Sara Sanders. "Comprehension Theory and Second Language Pedagogy." *TESOL Quarterly* 20 (1986): 9–16.
155. Nation, I. S. P. "Beginning to Learn Foreign Vocabulary: A Review of the Research." *RELC Journal* 13 (1982): 14–36.
156. Nuttal, Christine. *Teaching Reading Skills in a Foreign Language.* London: Heinemann, 1982.
157. Oller, John W. "Evidence for a General Language Proficiency Factor: An Expectancy Grammar." *Issues in Language Testing.* Ed. John W. Oller. Rowley, MA: Newbury House, 1983: 3–10.
158. Omaggio, Alice C. "Pictures and Second Language Comprehension: Do They Help?" *Foreign Language Annals* 12 (1979): 107–16.
159. ———. *Language Teaching in Context, Proficiency Oriented Instruction.* Boston: Heinle, 1986.
160. Osgood, Charles. "Where do Sentences Come From?" *An Interdisciplinary Reader in Philosophy, Linguistics and Psychology.* Ed. David Steinberg & Leon A. Jakobovits. London: Cambridge Univ. Press, 1971: 497–531.
161. Ostyn, Paul & Pierre Godin. "RALEX: An Alternative Approach to Language Teaching." *Modern Language Journal* 69 (1985): 346–55.
162. Palinscar, Annemarie & Ann Brown. "Reciprocal Teaching of Comprehension Fostering and Comprehension-monitoring Activities." *Cognition and Instruction* 1 (1984): 117–75.
163. Phillips, June. "Practical Implications of Recent Research in Reading." *Foreign Language Annals* 17 (1984): 285–96.
164. Pichert, James W. & Richard C. Anderson. "Taking a Different Perspective on a Story." *Journal of Educational Psychology* 69 (1977): 309–15.
165. Pike, Kenneth. "Nucleation." *Modern Language Journal* 44 (1969): 291–95.
166. Pressley, Michael. "Childrens' Use of the Keyword Method to Learn Simple Spanish Vocabulary Words." *Journal of Educational Psychology* 69 (1977): 465–72.
167. Raimes, Ann. "What Unskilled ESL Students Do as They Write: A Classroom Study of Composing." *TESOL Quarterly* 19 (1985): 229–58.
168. Reicher, Glenn M. "Perceptual Recognition as a Function of Meaningfulness of Stimulus Material." *Journal of Experimental Psychology* 8 (1969): 275–80.
169. Rodgers, Theodore S. "On Measuring Vocabulary Difficulty: An Analysis of Item Variables in Learning Russian-English Vocabulary Pairs." *IRAL* 7 (1969): 327–43.
170. Rubenstein, Herbert, Lonnie Garfield & Janet Millikan. "Homographic Entries in the Internal Lexicon." *Journal of Verbal Learning and Verbal Behavior* 9 (1970): 487–94.
171. Rumelhart, David E. "Notes on Schema for Stories." *Representation and Understanding.* Ed. Donald G. Bobrow & Allan Collins. New York: Academic Press, 1975.
172. ———. "Toward an Interactive Model of Reading." *Attention and Performance.* Ed. Stanislav Dornic. New York: Academic Press, 1977: VI, 573–603.
173. ——— & James L. McClelland. "Interactive Processing through Spreading Activation." *Interactive Processes in Reading.* Ed. Alan M. Lesgold & Charles A. Perfetti. Hillsdale, NJ: Erlbaum, 1981: 37–60.
174. Salling, Aage. "Essays in Comparative Vocabulary Studies." *Modern Language Journal* 42 (1958): 222–25.
175. Samuels, S. Jay & Michael L. Kamil. "Models of the Reading Process." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 185–224.
176. Sanford, Anthony J. & Simon C. Garrod. *Understanding Written Language.* New York: Wiley, 1981.
177. Saragi, T., I. S. P. Nation & G. F. Meister. "Vocabulary Learning and Reading." *System* 6 (1978): 72–78.
178. Schallert, Diane L. "The Significance of Knowledge: A Synthesis of Research Related to Schema Theory." *Reading Expository Material.* Ed. Wayne Otto

& Sandra White. New York: Academic Press, 1982: 13–48.
179. ———, Sara L. Ulerick & Robert J. Tierney. "Evolving a Description of Text through Mapping." *Spatial Learning Strategies: Techniques, Applications, and Related Issues.* Ed. Charles D. Holley & Donald F. Dansereau. New York: Academic Press, 1984: 255–74.
180. Schank, Roger C. *Reading and Understanding: Teaching from the Perspective of Artificial Intelligence.* Hillsdale, NJ: Erlbaum, 1982.
181. Schmid, Richard F. "Prior Knowledge, Context Familiarity and the Comprehension of Natural Prose." Diss. Arizona State Univ., 1977.
182. Schneider, Walter & Richard Shiffrin. "Theoretical Note: Categorization (Restructuring) and Automatization: Two Separable Factors." *Psychological Review* 92 (1985): 424–28.
183. Schuberth, Richard E. & Peter D. Eimas. "Effects of Context on the Classification of Words and Nonwords." *Journal of Experimental Psychology: Human Perception and Performance* 3 (1977): 27–36.
184. Sciarone, Abondio G. *Woordjes Leren in het Vreemdetalenonderwijs.* Muiderberg: Continho, 1979.
185. Searle, John. *Speech Acts.* London: Cambridge Univ. Press, 1969.
186. Seibert, Louise C. "A Study on the Practice of Guessing Word Meanings from a Context." *Modern Language Journal* 29 (1945): 296–322.
187. Shiffrin, Richard & Walter Schneider. "Controlled and Automatic Human Information Processing: II. Perceptual Learning, Automatic Attending, and a General Theory." *Psychological Review* 84 (1977): 127–90.
188. Shohamy, Elana. "Input and Output in Language Testing." Practice and Problems in Language Testing. Papers from the International Symposium on Language Testing. Colchester, England, 1984. (ERIC: ED 275 173.)
189. Simmons, L. V. T. "A Vocabulary Count Based on Three German Dramas." *Modern Language Journal* 14 (1929): 33–36.
190. Sim, Donald. "Links between Context and Selected Features of Grammatical Cohesion in English, and Performance in Advanced Reading Comprehension for Overseas Students." Diss. Manchester Univ., England, 1979.
191. Smith, Frank. *Understanding Reading.* New York: Holt, Rinehart, 1971.
192. Steffensen, Margaret S., Chitra Joag-Dev & Richard C. Anderson. "A Cross-cultural Perspective on Reading Comprehension." *Reading Research Quarterly* 15 (1979): 10–29.
193. Stein, Nancy L. "What's in a Story: Interpreting the Interpretations of Story Grammars." *Discourse Processes* 5 (1982): 319–35.
194. Sternberg, Robert J., Janet S. Powell & Daniel B. Kaye. "Teaching Vocabulary-building Skills: A Contextual Approach." *Classroom Computers and Cognitive Science.* Ed. A. C. Wilkinson. New York: Academic Press, 1983: 121–43.
195. Swaffar, Janet. "Reading Authentic Texts." *Modern Language Journal* 69 (1985): 16–34.
196. ———. "The Structure of Verbal Meaning." *The Design and Evaluation of African Language Learning Materials.* Ed. David Dwyer. East Lansing, MI: African Studies Center, 1986: 26–66.
197. ———. "Reading and Cultural Literacy." *Journal of General Education* 38, ii (1986): 70–84.
198. Tan, Soon Hock & Chu Poh Ling. "The Performance of a Group of Malay-Medium Students in an English Reading Comprehension Test." *RELC Journal* 10 (1979): 81–89.
199. Tarnóczi, Loránt. "Wortbestand, Wortschatz, Wortfrequenz." *IRAL* 9 (1979): 297–318.
200. Thackeray, William Makepeace. *Vanity Fair.* New York: Dodd Mead, 1985.
201. Thorndike, Robert. *Reading Comprehension Education in Fifteen Countries.* New York: Wiley, 1973.
202. Thorndyke, Perry W. "Cognitive Structures in Comprehension and Memory of Narrative Discourse." *Cognitive Psychology* 9 (1977): 77–110.
203. Tierney, Robert J. & James W. Cunningham. "Research on Teaching Reading Comprehension." *Handbook of Reading Research.* Ed. P. David Pearson. New York: Longman, 1984: 609–55.
204. Tompkins, Jane P. "An Introduction to Reader-Response Criticism." *Reader Response Criticism: From Formalism to Post-Structuralism.* Ed. Jane P. Tompkins. Baltimore: Johns Hopkins Univ. Press, 1980: ix–xxvi.
205. Tulving, Endel & Cecille Gold. "Stimulus Information and Contextual Information as Determinants of Tachistscopic Recognition of Words." *Journal of Experimental Psychology* 66 (1963): 319–27.
206. Twyford, Charles W. "The Effect of Syntactic Information, Pragmatic Expectation, and Cognitive Style on Learners' Comprehension of a Second Language." Diss. Indiana Univ., 1980.
207. Ulijn, Jan. "Foreign Language Reading. Conceptual and Syntactic Strategies and Their Consequences for the Role of the Native Language." *IRAL* 22 (1984): 71–73.
208. Van Dijk, Teun A. "Semantic Macrostructures and Knowledge Frames in Discourse Comprehension." *Cognitive Processes in Comprehension.* Ed. Marcel Just & Patricia Carpenter. Hillsdale, NJ: Erlbaum, 1977.
209. ——— & Walter Kintsch. *Strategies of Discourse Comprehension.* New York: Academic Press, 1983.
210. Vigil, Virginia D. "Authentic Text in the College-Level Spanish I Class as the Primary Vehicle of Instruction." Diss. Univ. of Texas, 1987.
211. Vipond, Douglas. "Micro- and Macroprocesses in Text Comprehension." *Journal of Verbal Learning and Verbal Behavior* 19 (1980): 276–96.
212. Walters, Joel & Yuval Wolf. "Language Proficiency, Text Content and Order Effects in Narrative Recall." *Language Learning* 36 (1986): 47–63.
213. Wattenmaker, William, Gerald Dewey, Timothy Murphy & Douglas Medin. "Linear Separability and Concept Learning: Context, Relational Prop-

erties, and Concept Natu
ogy 18 (1986): 158–94.
214. Wimsatt, W. K., Jr. with M
Verbal Icon: Studies in the M
of Kentucky, 1954.
215. Wittgenstein, Ludwig. *The*
York: Harper & Row, 1
216. Wittrock, Merlin C., Caroly
torow. "Reading as a Ge
of Educational Psychology 6
217. Wolff, Dieter. "Unterschied
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214. Wimsatt, W. K., Jr. with Monroe C. Beardsley. *The Verbal Icon: Studies in the Meaning of Poetry.* NP: Univ. of Kentucky, 1954.
215. Wittgenstein, Ludwig. *The Blue and Brown Books.* New York: Harper & Row, 1958.
216. Wittrock, Merlin C., Carolyn Marks & Marleen Doctorow. "Reading as a Generative Process." *Journal of Educational Psychology* 67 (1975): 484–89.
217. Wolff, Dieter. "Unterschiede beim muttersprachlichen und zweitsprachlichen Verstehen." *Linguistische Berichte* 106 (1986): 445–55.
218. ———. "Verstehensprozesse in einer zweiten Sprache." *Studium Linguistik* 17/18 (1985): 162–74.
219. Wyatt, David. "Computer-Assisted Teaching and Testing of Reading and Listening." *Foreign Language Annals* 17 (1984): 393–407.
220. Zabrucky, Karen. "The Role of Factual Coherence in Discourse Comprehension." *Discourse Processes* 9 (1986): 197–220.
221. Zvetina, Marina. "From Research to Pedagogy: What Do L2 Reading Studies Suggest?" *Foreign Language Annals* 20 (1987): 233–38.

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