The Three Cueing System

By Marilyn Jager Adams
Visiting Scholar, Harvard University Graduate School of Education

From Adams, M. J. (1998). "The Three-Cueing System." In F. Lehr and J. Osborn (Eds.), Literacy For All Issues In Teaching And Learning, pp. 73-99. New York Guilford Press.

The meaningfulness of a text depends no more on the knowledge and thought with which it has been written than it does on the knowledge and thought with which it is read. Indeed, readers can interpret and evaluate an author's message from the print on the page only to the extent that they possess and call forth the vocabulary, syntactic, rhetorical, topical, analytic, and social knowledge and sensitivities on which the meaning of the text depends.

Over the last several decades, cognitive scientists have energetically investigated the extent to which such dimensions of background knowledge and responsiveness might explain individual differences in reading proficiency. As expected, children do contrast along such dimensions, both with each other and with the demands of their texts. Also as expected, instructional support of such knowledge and strategies generally does result in increases in the productivity of their reading. Yet, research has also shown that as children's reading experience grows, these sorts of capabilities tend to grow alongside. That is, to the extent that children do read, they generally do learn new words, new meanings, new linguistic structures, and new modes of thought in course (Stanovich, 1993).

The wisdom of the popular dictum, that reading is best learned through reading, follows directly. So, too, however, does the seriousness of its most nettlesome caveat: Where children find reading too difficult, they very often will not do it--or at least not with the sort of engagement that best fosters learning. Fortunately, with respect to the language and meaning of text, finding selections that are within a child's comfort level is rarely a problem. However, the same is not true with respect to the wording of text.

M. J. Adams Three-Cueing System

Until well into the middle grades, children's ability to understand text that is read aloud to them significantly exceeds their ability to understand the same text when reading on their own (Curtis, 1980). The bulk of this difference is traced to their difficulties in reading the words. Moreover, poorly developed word recognition skills are the most pervasive and debilitating source of reading difficulty (Adams, 1990; Perfetti, 1985; Share and Stanovich, 1995).

Words, as it turns out, are the raw data of text. It is the words of a text that evoke the starter set of concepts and relationships from which its meaning must be built. Research has shown that for skillful readers, and regardless of the difficulty of the text, the basic dynamic of reading is line by line, left to-right, and word by word. It is because skillful readers are able to recognize words so quickly that they can take in text at rates of approximately five words per second or nearly a full type-written page per minute. It is because their capacity for word recognition is so over learned and effortless that it proceeds almost sub-attentionally, feeding rather than competing with comprehension processes. Most surprising of all, research has taught us that what enables this remarkably swift and efficient capacity to recognize words is the skillful reader's deep and ready knowledge of their spellings and spelling-speech correspondences. During that fraction of a second while the eyes are paused on any

given word of the text, its spelling is registered with complete, letter wise precision even as it is instantly and automatically mapped to the speech patterns it represents.

Although scientists are only beginning to understand the various roles of these spelling-to-speech translations, they are clearly of critical importance to the reading process. To the extent that knowledge of spelling-to-speech correspondences is underdeveloped (as evidenced, for example, by subnormal speed or accuracy in reading nonsense words), it is strongly and reliably associated with specific reading disability (Rack, Snowling & Olson, 1992). Moreover, research affirms that except as children have internalized the spelling-to-speech correspondences of the language, learning to recognize an adequate number of words with the speed and accuracy on which fluent reading depends is essentially impossible.

Useful knowledge of the spelling-to-speech correspondences of English does not come naturally. For all children, it requires a great deal of practice, and for many children, it is not easy. The acquisition of this knowledge depends on developing a reflective appreciation of the phonemic structure of the spoken language; on learning about letter-sound correspondences and spelling conventions of the orthography; and on consolidating and extending this knowledge by using it in the course of one's own reading and writing. Each of these accomplishments depends, in turn, on certain insights and observations that for many if not most children are simply not forthcoming without special instructional guidance and support (for review, see Adams, 1990). As researchers have gained appreciation of the critical importance of able word recognition within the reading complex, they have also uncovered reasons for its difficulty (e.g., Juel, 1994; Liberman & Liberman, 1990; Stanovich, 1986) and a variety of instructional strategies for easing, speeding, and assessing its acquisition (e.g., Ball & Blachman, 1991; Byrne & Fielding-Barnesley, 1989, 1991; Henry, 1989; Lundberg, Frost, & Petersen, 1988; Uhry & Shepard, 1993). Moreover, it is because there is far, far more to literacy development than recognizing the words that these lessons are of such crucial importance to everyone in the business of reading education.

What is the Three-Cueing System

Over the last few years, I have spent much time in schools around the country, working with teachers and administrators. My challenge has been to tell them about these lessons from research and their implications with respect to instruction. At some point during such sessions, I am almost inevitably asked how what I have said relates to the three-cueing system.

The first time I was hit with this question, I naively asked what, specifically, my audience meant by "the three-cueing system." Whose three-cueing system? Although nobody could provide a reference, someone in my audience graciously drew a schematic of the three-cueing system for me (see Figure 1).

I was greatly relieved. I understood this schematic. It looked to be nothing more or less than a Venn diagram. As such, its interpretation was straightforward. The intersection or overlap of the circles of a Venn diagram correspond to a logical AND between the sets its circles respectively represent. In logic, when an outcome depends on any n umber of elements linked by AND, it means that if any of those elements is missing, the outcome will not follow. Thus by depicting the meaning of a text in the intersection of its semantic, syntactic, and gral2hol2honic cues, the Venn diagram succinctly asserts that the meaning of a text depends on all three; all three of these types of information are necessary,

all three must be properly processed, and not one of them can be safely ignored or finessed except at the risk of forfeiting or distorting the meaning of the text. Sometimes, as shown in Figure 1, a fourth cueing system, pragmatics, is included to indicate that, in addition, getting to the author's point from what she or he has literally written depends on the application of practical knowledge and good sense.

Not only was the logic of this schematic clear to me, its evident message was thoroughly familiar as well. That the meaning of text is constructed by the reader as jointly determined by its lexical, semantic, and syntactic constraints had been a central theme of the reading literature in the late 1970s and early 1980s (examples include Anderson & Pearson, 1984; Bransford, Barclay & Franks, 1972; Brown, Bransford, Ferrara, and Campione, 1983; Perfetti & Roth, 1977; Rumelhart, 1980; Rumelhart & Ortony, 1977; Sanford & Garrod, 198 1; Smith, 197 1; Stanovich, 1980). It was, as a matter of fact, a literature to which 1, too, had contributed (Adams, 1980, 1982; Adams, M. J. Adams Three-Cueing System Anderson, & Durkin, 1978; Adams & Bruce, 1982; Adams & Collins; 1979; Huggins & Adams, 1980). I was delighted to find that the essence of the researchers' collective effort had so enduringly impressed the practitioners before me.

Feeling thus endorsed, I turned attention to how each of the three "cueing systems" could mislead a reader except as used in coordination with the others. To concretize the point, I presented a number of examples and linguistic surprises; I showed how the system explained a variety of confusions due to developmental difficulties and crosslinguistic differences; and I led my audience to share examples from their own classrooms and discuss their instructional implications. This was happy, familiar territory, and I carried on for nearly an hour. My audience was clearly interested. Yet, they also seemed a bit uncomfortable. It was evident from their faces and posture that what I was saying differed from what they were expecting in some fundamental way. Whatever they saw as the main point of this schematic, I knew I was somehow missing it.

In fact, I understate the dissonance in the room that day. When I asked these people what they meant by the three-cueing system, they looked at me as though I were from Mars. They were at least as embarrassed as 1. For indeed, how could I not know? How could I present myself to them as an expert on early literacy and not know. What was at issue here was clearly not any general notion of the interplay of syntax, semantics, and graphophonenics but, rather, some particular, specific version of this notion-one with which I was frankly unfamiliar.

The Source of the Three-Cueing System

From that day on, it seemed that I encountered the three-cueing system at every turn. Not only was I asked about it again and again, but I also found pictures of or allusions to it in in-service materials across the country and at the center of a surprising number of state and district reading/language arts documents. Though the schematic differed slightly from one source to the next, the common ancestry was apparent. Casually, at first, I began to collect examples (see Appendix 1).

Idle curiosity it might have remained, except that I soon found the three-cueing system getting in the way of my efforts to communicate with practitioners more often than it helped. The problem, to my mind, was not the schematic but some of the interpretations that had become attached to it. Given the widespread familiarity of the schematic in the community of practice, I wanted to correct and clarify its intent. To do so, I needed to find the original. I was confident of the original author's logical leanings

and scholarship from the very fact that she or he had chosen a Venn diagram as means of expression.

I began to search in earnest. In addition to tackling the literature, I took to asking audiences everywhere if they had encountered this schematic and if they could give me a source. People gave me copies of the schematic instead, and my collection grew. Still, in not one single instance, did the graphic include a citation of its source.

Turning to the internet, I posted a query to the TAWL (Teachers Applying Whole Language) list serve. A number of people responded, indicating their familiarity with the schematic ("I'm looking at it right now," wrote one). Some had hypotheses as to its original author. Most prominently, these suggestions included Ken and Yetta Goodman, Marie Clay, Don Holdaway, and Brian Cambourne. However, nobody was sure. Notably, Ken Goodman, who is himself a frequent participant on the TAWL list serve, seemed most perplexed of all.

In addition to asking practitioners, I probed my colleagues in educational research, beginning with those whom I have long revered as having near-encyclopedic knowledge of the literature. As it turns out, the schematic was unfamiliar to most of them, as it had been to me. Their best guesses as to its origin were by and large the same as those offered by the TAWL subscribers. A few were certain they had seen it before; they reached back into their minds with that pained look of arduous recall. I became hopeful. But again, to no avail. In every one of these cases, interestingly, what I ultimately got back was a pointer to work by Lois Bloom. Indeed, Bloom did publish such a Venn triplet, twice. In the first case (Bloom, 1970, p. 232), the circles are labeled "Cognitive Perceptual Development ... .. Linguistic Experience," and "Nonlinguistic Experience," and their overlap is labeled "Linguistic Competence." In the second (Bloom & Lahey, 1978, p. 22), the three circles are labeled "Form," "Content," and "Use," and their overlap as "Language." In other words, Bloom's graphic was similar, but her topic was not. Bloom was not the source I was seeking, but her repeated citation did affirm my faith in these people's mental inventory of the literature they had read. Whatever the true source of the three-cueing schematic, I was increasingly convinced that it was not part of the mainstream academic repertoire.

As I continued my search, several people suggested that the schematic's original printing had been in a publication of the New Zealand Ministry of Education. Brian Cutting, now Educational Director of the Wright Group/Sunshine Reading Programme and who has long been centrally involved in reading practice, policy, and research in New Zealand, valiantly volunteered to help me out on this front, but again to no avail.

Among sources of consternation in this quest was the frequency with which the schematic was used and the similarity with which it was described in state and district reading documents. Pushing this angle, I was told by several people that the schematic came from the Frameworks group. This group operates through the Wayne-Finger Lakes Board of Cooperative Educational Services (BOCES) in New York with funding from Rigby Education and the Children's Literacy Foundation, a video-disc literacy in-service enterprise started by Ben Brady, founder of Rigby of America. Featuring Jan Turbill, Andrea Butler, and Brian Cambourrie, Frameworks is an outgrowth of Australia's "Early Literacy In-service Course" (ELIC) and offers in-services throughout the country on staff development and, in particular, on how to write a reading framework document.

Working from an advertisement in the International Reading Association's newspaper, Reading Today, I called the Frameworks office and requested information. They were very cordial, but the information never came.

Turning again to the internet, I submitted a query to the "Reading Specialists Online" at the Wright Group's website. In response, one of their specialists, Katy Kane, posted a very nice explanation of the origin and interpretive intent of the schematic on the Wright Group's online Question and Answer page: The term "cueing systems" comes from Ken and Yetta Goodman, Carolyn Burke, Marie Clay, Brian Cambourne, and New Zealand's Reading in Junior Classes. Cueing systems are assessed with running records (Clay) and reading miscue analysis (Goodman, Watson, Burke, et al) to illustrate the strategies that readers have at their disposal when confronting [unfamiliar words], how these strategies are integrated, what readers do when they come to something they don't know, what patterns emerge, how well readers self correct, and always and ever, what does what they have read mean to them. The Venn diagram is used and explained in Invitations (1994) by Regie Routman.

The version of the three-cueing schematic that appears in Routman's (1988, 1994) books is included in Appendix 1. Of note, it is one of only two that I have been able to find in archival journals or books as opposed to, for example, in-service handouts, framework documents, and advertising copy. The other, which is also the oldest in my collection, is from an article by David Pearson that first appeared in Language Arts in 1976 and was later reprinted in an International Reading Association volume on What Research Says Lo the Teacher (Samuels, 1983). 1 did not find this article on my own. Instead, it was sent to me by Pearson, himself, in response to one of my end-of-talk queries. He assures me that he created it on his own in 1976. Nevertheless, he, too, had been unaware of the schematic's present-day ubiquity-and seemed wholly bemused by the thought that it might have been he who started it. In any case, if this article by Pearson (1976) is the original source for the three-cueing schematic, then, insofar as I can tell, it lay dormant for over a decade.

The Significance of the Three-Cueing System

Again, my concerns with the three-cueing system relate not to the schematic, which I find wholly sensible insofar as it goes. My concerns relate instead, and in two major ways, to the interpretations so broadly attached to the schematic.

First, the three-cueing schematic is sometimes presented as rationale for subordinating the value of the graphophonernic information to syntax and semantics and, by extension, for minimizing and even eschewing attention to the teaching, learning, and use of the graphophonernic system. This interpretation directly contradicts the logical import of the Venn diagram which, by virtue of its structure, asserts that productive reading depends on the inter-working of all three systems. More importantly in the context of instructional guidance for teachers and school districts, such marginaliziation of the role of spelling to speech correspondences is alarmingly discrepant with what research has taught us about the knowledge and processes involved in learning to read.

My second major concern is that discussion of the remaining two or three systems syntax, semantics, and pragmatics-tends to be unproductively superficial in the discourse surrounding the three-cueing schematic. Given the extreme, if inappropriate, share of the reading load that is ascribed to these sophisticated systems, this lack of guidance with respect to the instructional support that each warrants is all the more troubling.

The Demise of the Graphophonemic System

Pearson's 1976/1978 article might well have been the original source not just of the three-cueing schematic but also of the de-emphasis of spelling-sound instruction that so often attends it. With respect to graphophonernic instruction, Pearson proposes that teachers should "value most highly those phonics skill activities which allow children to utilize the most semantic and syntactic information while they are 'cracking the code,"' and, conversely, "value least highly those phonics skill activities which are most isolated from context" (Pearson, 1978, p. 90). To anchor this argument, he writes, . Efficient readers maximize their reliance on syntactic and semantic information in order to minimize the amount of print to speech processing (call this decoding, phonic, or grapho-phonemic analysis) they have to do.... For example, it doesn't take much visual or grapho-phonemic information to confirm the hypothesis that telescope fits into the sentence, "The astronomer looked through the _." (p. 86).

Presented in excerpt, however, the force of such quotes may be misleading; in journal articles as in children's literature, context matters. A full read of the paper assures that Pearson's goal is one of promoting classroom support of semantic and syntactic factors not instead of but relative to phonics. Thus, he clarifies, although initial phonics instruction may need be conducted "in isolated contexts, we will always require the intermediate phonics-in-context step p[Lor Lo the attempt to have children transfer the skill to a real reading situation" (Pearson, 1978, p. 90). To illustrate this intermediate, phonics-in-context step, he provides examples that look very much like traditional skills worksheets and very little like the whole language activities of today; the suggested activities are primarily designed to teach phonics, albeit with semantic and/or syntactic support (e.g., given a picture of a can, choose the label: can. cane). In overview, Pearson's intention seems not in the least to dismiss or even diminish the teaching or learning of the graphophonernic system. It is instead to criticize texts and activities that are made abstruse or incomprehensible through emphasis of phonics elements to the exclusion or at the expense of the other, potentially supportive dimensions of language and learning. At the same time, he strives to emphasize the pedagogical importance of providing enlightened instructional support for the other two systems.

Pearson (1976, 1978) attributes the inspiration for his three-cueing system graphicor at least the ideas that the graphic was intended to capture-to a book by Frank Smith (1975). Smith, I would agree, deserves singular credit for the philosophy that spellings and spelling/sound correspondences are essentially irrelevant to reading or leaning to read (see Adams, 1991). On the other hand, insofar as I can determine, in neither that book nor any of his others, has Smith discussed reading in terms of semantic, syntactic, and graphophonernic cueing systems.

Rather, the description of reading in terms of semantic, syntactic, and graphophonernic cueing systems seems best attributed to early work by Ken Goodman (e.g., 1970a, reprinted in Smith, 1973; Goodman, 1970b, reprinted in Singer & Ruddell, 1976). Each of the systems, Goodman explains, is necessary and used simultaneously in the reading process.

The graphophonic system, Goodman continues, is particularly useful for beginning readers as they are developing control over written language. Drawing on their oral language competence, children "recode graphic input as speech" such that "the alphabetic character of the writing system makes it possible to match sound sequences already known with less familiar graphic sequences" (Goodman, 1976, p. 48 1). The print-to speech route, he suggests, falls to secondary or back-up status only as

the reader becomes proficient and, even then, he points out, "there is some echo of speech involved as the reader proceeds even in silent reading., At times, the reader may find it helpful to recode print as speech and then [construct its meaning]" (p. 482).

Meanwhile in his model, which he emphasizes "represents the 12roficient reader" (Goodman, 1976, p. 483), the process of rapidly sampling, predicting, and comprehending the text is continually monitored and adjusted through instant, easy access to words from their spellings and, as needed, spelling-sound correspondences. Given that the model "also represents the competence which is the goal of reading instruction" (p. 483), he quite reasonably cautions that restricting children's early instruction to isolated words and meaningless phonic elements is, at best, shortsighted. Goodman's thesis, in short, is that instruction should be designed with sensitive awareness that as readers gain in skill, their active attention is devoted less and less to sounding out words and more and more to the higher-order nuances and import of the text. In this spirit, he also provides more insightful and sophisticated discussion of the kinds of support warranted than I have seen in any recent text. Within the present discussion, however, the point is that neither can contemporary dismissal of spelling-sound instruction be traced to Goodman's early work.

If Routman (1978, 1994) borrowed the three-cueing system schematic from Pearson (1976), she does not mention him. Nor does she credit Goodman. Instead she attributes her inspiration to Holdaway (1979) and, indeed, Holdaway's express view of the utility of graphophonemic information is extreme.

Holdaway begins his discussion of graphophonernic cues with an example:' "An illuminating exercise to place oneself in a similar position to the beginning reader ... by using our own alphabetic code with deprived cues" (1979, p. 91). Through an exercise suitable to the London Times, he therewith purports to demonstrate the superfluousness of letters and spelling-sound correspondences. He then walks us, insight by insight, through an explanation of how it is that the full and complete wording of the following sentence leaps to mind, almost instantly and with incontestably clarity:

The exercise is intended to demonstrate not merely our scant dependence on letters while reading-only 12 of the 39 letters of this sentence are available-but, further, that what letter information we do use, need entail "no necessary phonic involvement" (Holdaway, 1979, p. 93). Instead, he assures us, our ready success in understanding the sentence is the product of nothing more than our deep and ready knowledge of the semantic and syntactic constraints of text. Plus our faith that the author would not write so as to foil or confuse our initial expectations. And solid sense of the informational value of word length and configuration cues. Along with an ability to parse words into roots and affixes given the scantiest visual cues. Complemented by a prodigious sense of the distributional properties and redundancies of English spelling.

Holdaway's exercise is fun. It sparkles with energy and intelligence as does his text throughout. His encrypted sentence (which, by the way, is intended to read, "Letters are not the only clues to unknown words") is a clever springboard for discussing the layers upon layers of redundancy that characterize written language. As a developmental analogy, however, it is unconvincing at best: The knowledge and processes he leads us to use in its decryption are not remotely available to the beginning reader. Nevertheless, this exercise is the departure point from which Holdaway builds his theory of how the reading process works and the instructional recommendations on which Routman, in turn, builds hers.

Routman's books, Transitions (1988) and Invitations (1994), in which she shares the attitudes and process of becoming a whole language teacher, are extremely popular among practitioners. Her treatment of phonics in her first book, Transitions (1988), is full of angst and ambivalence. On one hand, she acknowledges the pressure, from both within the educational community and without, that phonics be taught first and well; on the other, she is concerned that this pressure is misguided. On one hand, she reports that the teaching of phonics had been the main emphasis of her pre-service and graduate training; on the other, she has just read, and been strongly impressed with, Holdaway's (1979) book. On one hand, she cites the validation of phonics instruction by the then recent report of the National Commission on Reading (Anderson, Hiebert, Scott, & Wilkinson, 1985), Becoming A Nation of Readers; on the other, she does not see how such phonics emphasis can be reconciled with the report's tandem recommendation for the use of more meaningful, memorable stories with beginners. Although she has heard "enthusiastic talk by salesmen of 'predictable text,' 'meaningful story,' and 'real literature,"' the basal textbooks she has seen are still "driven by skills and phonics" (1988, p. 23). She disdains the detailed teacher manuals that accompany the basals as "demeaning to teachers and to children. They discourage independent thought and imply that teachers and students are not to be trusted" (p. 24). Yet she also reports with satisfaction her past pleasure and success in using Recipe -for Reading (Traub & Bloom, 1975), a phonics supplement in which skills are taught explicitly, systematically, and in isolation.

Routman observes that good readers both know and use phonics well. In contrast, nearly all poor readers struggle with phonics and, when reading meaningful text, this struggle directly detracts from their capacity for comprehension. The epiphany came, she claims, in the course of her experience as a Reading Recovery trainee. There she has witnessed beginners who "became competent readers by relying primarily on meaninge specially picture cues-and memory for text" and "without ever having mastered short vowels and other phonics generalizations" (19-88, p. 45). The paradox, to her mind, was resolved. "Effective readers," she concludes, "use all three cueing systems interdependently. Ineffective readers tend to rely too heavily upon graphophonic cues" (p. 41). Moreover, she explains, "It has become crystal clear to me-and it has taken about ten years to come to this understanding-that children learn phonics best after they can already read. I am convinced that the reason our good readers are good at phonics is that in their being able to read they can intuitively make sense of phonics" (p. 44).

Thus, in her second book, Invitations (1994, p. 147), Routman presents the three cueing schematic with the following introduction: Proficient readers function with an interdependence between the three cueing systems: semantics, syntax, and grapho-phonics. Semantic cues (context: what makes sense) and syntactic cues (structure and grammar: what sounds right grammatically) are strategies the reader needs to be using already in order for phonics (letter-sound relationships: what looks right visually and sounds right phonetically) to make sense .... While phonics is integral to the reading process, it is subordinate to semantics and syntax. (This is apparently why the graphophonic system is depicted beneath the other two in her version of the diagram. Note, however, that the position of the circles is formally of no significance to the logic of a Venn diagram. What matters is only whether they overlap partly, totally, or not at all with each other and the outcome of interest.)

The major reason for poor readers' over-reliance on graphophonic cues, Routman surmises, is its instructional overemphasis by their parents and teachers. To help teachers discourage parents from asking their children to sound words out, she provides a reproducible letter (see Appendix 2), entitled,

"Ways to Help your Child with Reading at Home" (1994, p. 200b). I ask that you read through the recommendations in this letter to parents: Phonics truly seems the last resort.

To help teachers deal with unknown words without directing attention to graphophonernic cues, Routman provides a similar reproducible set of guidelines for the classroom (1994, p. 226b). In addition, she describes a few ways of introducing various phonic elements in what she deems proper subordination to other literacy goals. Although some of these activities are similar to those proposed by Holdaway (1979), the differences are also noteworthy. First, Holdaway's recommendations were intended principally for kindergarten children and motivated by his experience with Maori children who approached the challenge of learning to read with much trepidation and little notion of what it was all about. Routman's recommendations are directed to teachers across the kindergarten and primary grades. Second, although Holdaway uses context for motivation and support, he gradually does expose and exercise the full logic of the alphabetic system, if somewhat haphazardly. Routman's (1994) activities, in contrast, are focused on initial and final consonants: The vowels, she submits, are generally unnecessary for printed word recognition, and their evident difficulty should convince us that beginning readers are not developmentally ready for them anyhow. In refusing the vowels and focusing instead on bits and pieces of occasional words, Routman's approach not only denies the utility of the alphabetic principle but falls to reveal its basic logic and structure. Routman frequently acknowledges the difficulty of pursuing her avowed instructional course:

It has taken me well over ten years to feel completely comfortable with this approach. One thing that eased my further transition was holding onto the spelling workbooks for a while after I had long given up phonics worksheets. Knowing that the skills were still being covered relieved my conscience and helped my comfort level. Like many teachers, I did not believe children would really learn to read without a heavy dose of phonics first. (1994,p.149)

Encountering such remarks again and again, I kept wondering if the reason she was able to make the switch complete was because she had become a resource teacher. Visiting classrooms only "by invitation" to give demonstration lessons, she was no longer responsible for monitoring the children's larger developmental progress. In any case, here is a note Routman received from a regular first-grade teacher:

I did more phonics in context this year, noting beginning and ending sounds and digraphs in chart poems and Bic, Books. The kids really like the big charts we made where they could add their own words, but I am still struggling to find a balance in teaching phonics. I find myself feeling pressure from some of the second grade teachers who expect kids to arrive with solid word attack skills. Also, I feel guilty for not giving spelling tests. When I'm teaching all the phonics sounds, I feel as through I'm teaching spelling too. I still teach phonics separately even though I don't see kids transferring the skills. I notice that every time I pull a sound out of context, two or three kids give me an example of a word that doesn't fit the rule at all. I'm still not comfortable with the way I handle phonics. (1994, p. 157)

Having reprinted this letter so as to encourage others to take heart, Routman consoles,

"Most of us seem to find the transition from prescribed phonics in isolation to teaching meaningful phonics in the context of literature very difficult and slow going. It may be reassuring to know that

most teachers are struggling with making phonics teaching more relevant and applicable to reading and writing" (1994, p. 157).

Whether Routman's text is its source or echo, this attitude about the disruptiveness of phonics and its instruction is one that is very broadly held in the field. Appendix 3 shows a tabular summary of the three-cueing system, used in inservice sessions provided by the California Early Literacy Learning (CELL) Project which is affiliated with the Reading Recovery center at the San Bernardino campus of the California State University. Note, in particular, the admonition at top: "Let's all work together to avoid the phrase, 'sound it out'!" According to David Pesetsky, a professor in the Linguistics Department at the Massachusetts Institute of Technology, it was an in-school poster very like Routman's letter to parents, along with his first-grade son's steadfast insistence that he was not to sound words out, that initially triggered his own concern about how reading was being taught. Seeking an audience for that concern, first in his son's classroom, then in his son's school, then at the district level, he was ultimately given a copy of the proposed Reading Curriculum Framework for the State of Massachusetts--only to find the phonics-last philosophy promoted in that document as well.

The result was the famous letter from 40 linguists and psycholinguists to the Massachusetts Secretary of Education (see Appendix 4). The focus of the linguists' protest is the document's promotion of the view that "the decoding of written words plays a relatively minor role in reading compared to strategies such as contextual guessing. This treats the alphabetic nature of our writing system as little more than an accident, when in fact it is the most important property of written English." They conclude: We are concerned that the Commonwealth, through its powers to set standards for schools, should presume to legislate an erroneous view of how human language works, a view that runs counter to most of the major scientific results of more than 100 years of linguistics and psycholinguistics. We are even more concerned that uninformed thinking about language should lie at the heart of a "standards" document for Massachusetts schools. (See Appendix 4) Broadly circulated via the internet and in part, no doubt, because of the world renown of many of its individual signers, this letter quickly found its way into policy forums on reading across the country. In Massachusetts, it was singularly responsible for the retraction and rewriting of the state's language arts framework to include due acknowledgement of the importance of teaching children to how to understand and use phonics.

Routman's observation that good readers, as a group, are quite facile with phonics is correct. Yet her conjecture that this is because they are good readers is just backwards. Again, scientific research argues incontrovertibly that becoming a good reader depends on understanding and using spellings and spelling-sound correspondences and, conversely, that poorly developed knowledge or facility with spellings and spellingsound correspondences is the most pervasive cause of reading delay or disability (Rack, Snowling, & Olson, 1992; Stanovich, 1986). Research further demonstrates th at, with the exception of no more than 1-3% of children, reading disability can be prevented through well-designed early instruction (Vellutino et al., 1996). However, such instruction must include attention to phonics, and is most effective when it includes explicit, systematic instruction on the alphabetic principle, including phonemic awareness and on the spelling-sound patterns and conventions of English, as well as an active emphasis on practicing and using that knowledge both in isolation and in the context of meaningful reading and writing (Bond & Dykstra, 1966; Brown & Felton, 1990, Chall, 1967; Foorman et al, 1997).

The Diminution of the Other Cueing Systems.

Given that the principal argument for the de-emphasis of phonics instruction has been that children are in greater need of developing their sensitivity to the syntactic, semantic, and pragmatic cues of text, one might expect an attendant surge in the amount and rigor of instruction on the latter. Yet, quite the opposite has happened. I had struggled with resulting problems a number of times from a number of angles and in a number of different situations before I realized them as part of the same elephant. One such encounter occurred as I was reviewing a draft language arts framework for one of the state departments of education. The topic was that of supporting vocabulary knowledge. The text did a laudable job of explaining the importance of ensuring that children possessed the background knowledge on which productive understanding of a word's meaning depended. However, the text neglected to mention anything about helping the children add the words per se to their vocabularies. I wrote a comment to this effect. But it went unheeded. On the next draft, I provided a carefully worded insert to the same effect. Still it was not accepted. I ran into this same oversight again as a worked on the reading advisory for another state. This time I was a legitimate co-author of the document, so I exercised the prerogative of adding the point:

Written language places far greater demands on people's vocabulary knowledge than does casual spoken language. Indeed, more advanced texts depend so heavily on precise wordino to build meanincy and message that, from the middle grades on, students' reading comprehension can be closely estimated by measures of their vocabulary. Students will be able to learn from these texts only if they approach them with most of the vocabulary they require. (California Department of Education, 1996, p. 9). The text goes on to discuss both the prospects of expanding one's vocabulary through reading, as explored by Nagy, Anderson, & Herman, (1987), as well as the potency of Matthew effects (the rich get richer) in understanding and retaining new vocabulary items (e.g., Robbins & Ehri, 1994), and suggests, quite sensibly I thought, that "Beginning in kindergarten, vocabulary growth should be actively supported in the classroom" (p. 10). Not long thereafter, I received an unauthorized copy of an email that had been circulating through the state internet referring to "Marilyn Adams's pernicious use of Nagy's vocabulary data." I didn't get it. I wrote to Bill Nagy. He didn't get it either.

I had a similar experience in critiquing the explanation of semantic cues in one of these draft frameworks. The text explained that semantic cues "are meaning cues used as readers bring their knowledge of the world, feelings, attitudes, and beliefs to the printed page." Correcting what again seemed to me to be nothing more than an oversight, I suggested the most minor edit: Semantic cues "are meaning cues used as readers bring their knowledge of the meanings of words and of the world, feelings, attitudes, and beliefs to the printed page." Again, the insert was rejected. How strange. After all, in cognitive psychology, the distributed semantics of words are held to be the starting points from which the meaning of text is constructed.

One of the fundamental tenets of the three-cueing rhetoric is that readers must learn to monitor their comprehension as they read. Thus, in the typical exposition of the threecueing system, a question is provided with each system. For the semantic cues, readers are to ask, "Does it make sense?" For the syntactic system, they are to ask, "Does it sound like language?" And for the pragmatic system, they are to ask, "Is this the language that should be used in this situation?" Encountering these questions in the draft framework on which I was working, it seemed to me that each could be augmented so as

to give teachers better guidance as to comprehension difficulties associated with its system. With this thought in mind, I added to the semantic question, "Do I understand to what the author is referring?" To the syntactic question, I added, "Do I understand how the author wants me to interrelate the concepts s/he has named?"

But I balked at the question provided for the pragmatic system. Pragmatic sensitivity is about the larger meaning and message of the text. It is about understanding why the author chooses to say what she or he says and how she or he chooses to say it. It is about the author's point and point of view. In Goodman's words, it is about "the subtle differences between the straightforward and the sarcastic, the profane and the profound, the humorous and the serious" (1976, p. 832). Pragmatic processing, in short, is Just another term for metacotgnitive processing. As such, and more so than for any of the other systems, sensitivity to pragmatics depends on readers' willingness and ability to examine the language, the cohesion, and the nuances of the text and to bring their own background knowledge actively and critically to bear. Of all the questions one might provide to clarify the role and importance of pragmatic processing, why in the world would the first choice be: "Is this the language that should be used in this situation?"

And then it hit me. In discussions of pragmatics within the three-cueing rhetoric, the standard explanation is that proficient readers, having experienced language in many contexts, are familiar with the kinds of words and language that are used in informal versus formal situations, in literature versus science, and so on. In other words, the question, "Is this the language that should be used in this situation?", is not intended to guide readers' pragmatic understanding of the text at all. It is instead intended exactly and only to remind them to use any such understanding they might have as means of assessing whether they have misidentified a word.

I was stunned. Yet, when I looked again, the questions attached to the other systems had the same character. None of these questions was directed toward supporting or strengthening the children's comprehension skills. The semantic question had nothing to do with prodding readers to monitor or extend their understanding of the text. The question is not "Does the text make sense given the words I've read?" but, instead, "Does this word make sense given my understanding of the text?" In view of this, the strong emphasis on choosing literature that matches students' prior knowledge and interests is understandable. However, the converse message-that comprehension instruction integrally involves building students' background knowledge and vocabulary so as to meet the demands of new textstends to get lost. The latter message was among the focal points of both Pearson's (1976) and Goodman's (1970b) works. It was, moreover, among the central and critical lessons of schema theory.

Similarly, the syntax of written text is important and tricky. Syntax is language's formal means of communicating the intended relations between concepts and events, as in the difference between "Students who like school get good grades" versus "Students who get good grades like school." In reading essays and informational texts, where the motive is to create new understandings and knowledge by building new relationships between familiar concepts, syntax is vital. In understanding algebra. problems, syntax is almost all that matters; whether the problem is about a plane in the wind or a riverboat in a current is only incidental with respect to the mathematics at issue. Learning to use the syntactic cues of text well is not easy. Yet, the syntactic issue in focus with the question "Does is

sound right?" is only that some strings of words are permissible in English, and some are not. The purpose of the question is only to alert the reader to syntactically anomalous word recognition errors.

I finally understood why my audience looked so puzzled on that first run-in with the threecueing system. They had been operating on the belief that the semantic, syntactic, and pragmatic cues were straightforward and familiar to children, and, because of this, were wholly available for use in finessing the graphophonernic system, which was complicated and unfamiliar. It had never occurred to them that there was much to teach or learn about the semantic, syntactic, and pragmatic cues involved in skillful reading. What I was saying must have been totally disorienting to these people.

Summary

If the intended message of the three-cueing system was originally that teachers should take care not to overemphasize phonics to the neglect of comprehension, its received message has broadly become that teachers should minimize attention to phonics lest it compete with comprehension. If the original premise of the three-cueing system was that the reason for reading the words is to understand the text, it has since been oddly converted such that, in effect, the reason for understanding the text is in order to figure out the words. How did this happen?

My reason for quoting so extensively from Routman's (1988, 1994) text was to convey a sense of how the three-cueing belief system is realized in the field-in terms of both its classroom practice and the arduous commitment of its practitioners. Although Regie Routman is extremely influential among practitioners, I do not believe her books to be the source of this widespread belief system. First, if they were, more people would have cited Routman as a source of the schematic. Yet, of the many, many people I asked, only one did so. Second, the very fact that there are so many slightly different versions of the schematic around suggests that people's knowledge of it is not coming from a book. Given the option, after all, it is much easier to cut and paste than to draw a graphic anew. Third, marginal interpretations of the three-cueing schematic are also too scattered for me to believe they are a product of book-learning. For example, in the core curriculum of one district with which I worked, cursive writing and spelling conventions are given as instances of the syntactic cueing system; inasmuch as the syntactic cueing system was explained as knowledge about the order and structure of language, these errors were understandable--except for the fact that syntax has nothing to do with the order or structural properties of letters.

Again, the simplifications and distortions that the three-cueing system has suffered are uncharacteristic of the fate of written information. My hypothesis is, instead, that the three-cueing system has principally proliferated through inservices, workshops, and conferences, and that it is through that process that its interpretation has been changed and its heritage forgotten. Such forums have become a common mode of inservice education in recent years:

With some exceptions, university- and college-level literacy courses have not kept pace with the widespread implementation of process instruction. Instead, process instruction has been largely a grassroots movement spreading from coast to coast. Organized teacher groups, known as Teachers Applying Whole Language (TAWL), have sprung up everywhere ... and have served as support groups for those implementing whole language. The majority of teachers not involved in these groups, however, has relied primarily on information learned from institutes, workshops, and

conferences conducted by whole language and writing process advocates. In many cases, teachers attending these meetings have taught other teachers in their school districts.

While the enthusiasm of teachers teaching teachers is commendable, the short-term nature of such training presents a unique problem; it virtually assures that only the rudimentary elements of these theories can be presented. (Reyes, 1992, p 429)

Consistent with Reyes's (1992) lament, the sobering revelation of this story is the profound breach in information and communication that separates the teaching and research communities. In the world of practice, the widespread subscription to the belief system that the three-cueing diagram has come to represent has wreaked disaster on students and hardship on teachers. At the same time, it is the underlying cause of not insi-nificant distrust and ill-will between teachers, teacher educators, and researchers. Yet, while teachers widely believe that the lore of the three-cueing system is based on the best of current research, researchers are barely aware of its existence, nature, or influence. The lesson of the story is thus clear and urgent. We must work together to rebuild the bridge, socially and intellectually, between those involved in research and practice. Toward regaining respect for as well as the productivity, morale, and forward momentum of our educational system, there may be no more important effort we can undertake.

References

Adams, M. J. (1980). Failures to comprehend and levels of processing in reading. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), Theoretical issues in readinR comprehension (pp. 87-112). Hillsdale, NJ: Lawrence Erlbaurn Associates.

Adams, M. J. (1982). Models of reading. In J. F. LeNy and W. Kintsch (Eds.), Language and comprehension, (pp. 193-206). Amsterdam: North Holland.

Adams, M. J. (1990). Beginning to read: Thinking and learning about pELnt. Cambridge, MA: The MIT Press.

Adams, M. J. (1991). Why not phonics and whole language? In W. Ellis (Ed.), All language and the creation of literacy, (pp. 40-53). Baltimore, MD: Orton Dyslexia Society.

Adams, M. J., Anderson, R. C., & Durkin, D. (1978). Beginning reading: Theory and practice. Language Arts, 55, 19-25.

Adams, M. J., & Bruce, B. C. (1982). Background knowledge and reading comprehension. In J. A. Langer & M. T. Smith-Burke (Eds.), Reader meets author Bridging the 2ap (pp. 2-25). Newark, DE: International Reading Association.

Adams, M. J., & Bruck, M. (1993). Word recognition: The interface of educational policies and scientific research. Reading and Writing: An Interdisciplina[Y Journal, 5, 113-139.