

Metaphoric Competence in Children with Learning Disabilities

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Metaphoric competence was examined in two groups of children with learning disabilities and one group of nondisabled peers ranging in age from 9-0 to 11-0 years. There were five girls and seven boys in each group. One group of students with learning disabilities had a history of spoken language impairment and the other group did not. Subjects were administered three verbal metaphor tasks (comprehension, preference, and completion) and a visual metaphor task, the Metaphor Triads Task (MTT). The three verbal metaphor tasks were administered in three contexts: (a) sentence, (b) story, and (c) story plus visual (pictorial) support. The group with a history of language impairment consistently performed more poorly on the metaphor tasks than the group without a history of language impairment, who, in turn, performed more poorly than the nondisabled children on all but the MTT. Context variations had no effect on children's performance. Theoretical and clinical implications will be discussed.

The language-learning problems of students with learning disabilities have been well documented (Roth & Spekman, 1989; Wallach & Butler, 1984). Language deficiencies in these students have been found in the comprehension and production of complex syntactic structures (Byrne, 1981; Semel & Wiig, 1975); vocabulary (Fry, Johnson, & Muehl, 1970); use of morphology (Fletcher, Satz, & Scholes, 1981; Vogel, 1977; Wiig & Semel, 1975); word retrieval (Denckla & Rudel, 1976; German, 1979); narrative discourse (Merritt & Liles, 1987; Roth & Spekman, 1986); and figurative language (Seidenberg & Bernstein, 1986). In the present study, we were interested in further exploring the ability of children with learning disabilities to produce and comprehend metaphors, the prototypical form of figurative language (Winner, 1988).

The ability to understand and produce metaphors is thought to reflect an individual's cognitive level (Arlin, 1978; Billow, 1975); creativity (Gardner, Kirchner, Winner, & Perkins, 1975; Schaefer, 1975); abstract reasoning ability (Kogan, Connor, Gross, & Fava, 1980; Ortony, 1979); and linguistic competence (Seidenberg & Bernstein, 1986). Unlike early emerging language forms whose acquisition is complete by the time children enter school, the understanding and use of metaphors steadily improve through-

out childhood, adolescence, and into adulthood (Boswell, 1979). Measures of metaphoric competence thus provide a measure of children's developing conceptual and linguistic abilities throughout the school years.

Few studies have examined metaphoric abilities in children with language and learning disabilities. Nippold and Fey (1983) compared the metaphor comprehension abilities of 12 children with a history of language-acquisition difficulties (mean age = 10-7) with nondisabled peers on a metaphor explication task. The two groups performed similarly on two measures of literal language that tapped receptive vocabulary and grammatical understanding. The metaphor task involved explaining the meanings of 16 different metaphoric sentences, such as "Hair is spaghetti" and "Spring is a lady in a new coat." The nondisabled children correctly interpreted a significantly greater number of metaphors ($M = 14.2$) than the disabled subjects ($M = 10.5$). Most of the errors produced by the children with language-learning disabilities were literal in nature, whereas irrelevant responses were the most frequent error type for the nondisabled children. The students with language-learning disabilities demonstrated some facility in providing metaphoric explanations, but did not perform as well as the nondisabled students.

Seidenberg and Bernstein (1986) evaluated the ability of children with and without learning disabilities to comprehend metaphors. Subjects were 80 students with learning disabilities and 80 nondisabled children in Grades 3 through 6. Each subject was presented with eight short paragraph-length stories followed by three sets of four alternative sentences: a literal set, a simile set, and a metaphor set. Note that a simile is a variation of a metaphor that makes the comparison between the topic and vehicle more explicit through the use of the words *like* or *as* (e.g., "He ran like a frightened rabbit") (Nippold, 1988). For each set, subjects were asked to choose the sentence that best completed the story they had just read. Accuracy scores for the literal comprehension task were almost perfect, with a slight difference in favor of the nondisabled children. Consistent significant group differences were found for the two metaphor tasks across grade level. The children with learning disabilities showed a 2-year delay for the comprehension of similes and a 3-year delay for the comprehension of metaphors.

The present study expanded on these two studies by (a) including two groups of children with learning disabilities, (b) using several metaphor tasks, and (c) varying the contexts used to present the metaphors. The findings from the two previous studies suggest that children with language impairments and children with learning disabilities without histories of spoken language learning problems have deficient metaphoric understanding. It is unclear, however, whether the deficits exhibited by these two groups of children are comparable. Children with a previous history of spoken language impairment might continue to have more severe language deficits than children with learning disabilities (LD) without such histories. One manifestation of the severity of the language deficit would be particularly poor metaphoric competence. To explore this possibility, four metaphor tasks were administered to children with LD with and without a history of spoken language impairment. The four tasks were: a visual metaphor task, The Metaphor Triads Task (MTT) (Kogan et al., 1980), a comprehension task, a preference task, and a simile completion

task. Each of these metaphor tasks has been shown to be sensitive to developmental changes that occur during late childhood (Billow, 1981; Kogan et al., 1980; Pollio & Pollio, 1979; Silberstein, Gardner, Phelps, & Winner, 1982; Winner, Rosentiel, & Gardner, 1976). The tasks are described in detail in the next section.

The contexts in which the metaphors were presented were also varied in the present study. Metaphoric comprehension typically has been evaluated within the context of either a short paragraph or a sentence followed by four randomly ordered answer choices (e.g., Pollio & Pollio, 1979; Reynolds & Ortony, 1980). The contextual support provided by a short story is meant to create a more naturalistic task that will optimize metaphoric comprehension. Figurative language, like literal language, is usually embedded in a rich linguistic and physical context. Such contexts have been shown to reduce the time adults need to process metaphors (Ortony, Schallert, Reynolds, & Anton, 1978). The facilitating effects of contextual support of some aspects of figurative language have also been demonstrated in younger children. Ackerman (1982) found that the interpretations of conventional idioms by adults and 10-year-old children were fixed and less dependent on supportive linguistic context than those of 6- to 8-year-old children. Nippold and Martin (1989) recently reported a slight advantage for linguistic context in adolescents' interpretations of idioms. In addition, Nippold, Martin, and Erskine (1988) also found that linguistic context enhanced 10- to 17-year-old children's understanding of proverbs.

The effects of pictorial support are less clear-cut. Billow (1975) found that pictures did not improve children's explanations of metaphors. Honeck, Sowry, and Voegtle (1978), however, found that pictures facilitated children's understanding of proverbs in 7- to 9-year-olds. The proverbs in that study were semantically simple, generally referring to events and objects familiar to young children. In addition, children could simply point to the picture that best illustrated the meaning of a proverb rather than verbally explaining it. That is, the pictures made it easier for children to respond correctly; they might not have actually facilitated com-

prehension.

In the present study, we questioned whether linguistic and pictorial contextual cues would differentially affect the performance of children with learning disabilities and their nondisabled peers. To address this question, metaphoric comprehension, preference, and completion were evaluated in three contexts: (a) sentence, (b) story, and (c) story with visual (pictorial) support. Examples are provided in the next section.

METHOD

Subjects

Subjects were 24 children with learning disabilities and 12 nondisabled children between the ages of 9-1 and 11-0 years. The children with learning disabilities were identified in accordance with the guidelines specified in P.L. 94-142. These guidelines state that a specific learning disability is a disorder in one or more of the psychological processes involved in comprehending or producing spoken or written language. More specifically, all the children with learning disabilities exhibited at least a 1-standard-deviation discrepancy between intelligence, as measured by the Wechsler Intelligence Scale for Children-Revised (WISC-R) (Wechsler, 1974), and measures of academic achievement, such as the Wide Range Achievement Test (Jastak & Jastak, 1976) and the Woodcock-Johnson Psycho-Educational Battery (Woodcock & Johnson, 1977). WISC-R scores ranged from 90 to 117. In addition, to be included in the study, the children had to be reading at least 2 years below grade level, as measured by the Woodcock Reading Mastery Tests (Woodcock, 1973). The children also had to perform within normal age limits on the Quick Test (Ammons & Ammons, 1962), which is a measure of receptive vocabulary, and on two subtests of the Clinical Evaluation of Language Functions (CELF) (Semel & Wiig, 1980): Processing Word and Sentence Structure, and Producing Formulated Sentences. Age-level performance on these tests ensured that children with obvious spoken language deficits who might be expected to have difficulty understanding and producing metaphors

would not be included in the study.

Half of the 24 children with learning disabilities had a history of receptive and expressive spoken language deficits, in addition to a history of academic failure. These children, henceforth referred to as *learning disabled-language impaired* (LD-LI), were previously identified as language impaired by a certified speech-language pathologist and had been enrolled in language therapy during preschool and early elementary school years. All of the children had been dismissed from therapy at least 1 year before their participation in the present study. The remaining 12 children with learning disabilities, henceforth referred to as *LD-non-language-impaired* (LD-NLI), had no history of spoken language impairment. Their primary learning disability involved written language.

The remaining 12 subjects had no history of spoken language impairment or academic failure and were considered normal achievers. Subjects in each group were individually matched for mental age (MA) as measured by the Quick Test. There were five girls and seven boys in each group. Subjects came from upper middle class homes and attended a local private school. There were no minority children in the three groups. Means and standard deviations for CA, MA, language, and reading measures are presented in Table 1 for each of the three groups of children.

Procedure

All of the children were seen individually in their school for two test sessions. The Quick Test, the two subtests of the CELF, and the visual metaphor task (the MTT) were administered during the first session. The three verbal metaphor tasks (comprehension, preference, and completion) were administered during the second session. All testing was conducted by the first author. Half of the subjects received the comprehension task followed by the preference and completion tasks. The remaining subjects received the preference task followed by the completion and comprehension tasks. Each task began with instructions and practice items that included corrective feedback and specific examples to encourage metaphoric responses. Subjects had to provide

TABLE 1
Group Means and Standard Deviations (SD) for Chronological Age (CA), Mental Age (MA),
Language, and Reading Measures

Group	Quick Test		CELF raw scores ^a		Woodcock reading level
	CA	MA	Expressive	Receptive	
<i>LD-LI</i>					
Mean	10.0	11.6	47.8	42.3	2.7
SD	0.7	0.6	4.1	0.9	1.1
<i>LD-NLI</i>					
Mean	10.0	11.6	49.0	42.4	3.1
SD	0.6	0.6	4.3	0.9	0.6
<i>Nondisabled</i>					
Mean	9.8	11.6	48.8	42.8	5.3
SD	0.4	0.6	3.1	0.5	0.5

Note. LD-LI = learning disabled-language impaired; LD-NLI = LD-non-language-impaired; CELF = Clinical Evaluation of Language Functions.

^aExpressive measure was Producing Formulated Sentences subtest; receptive measure was Processing Word and Sentence Structure subtest.

at least one self-generated metaphoric response before the actual test items were presented.

Subject responses to the MTT and the completion task were tape-recorded and transcribed verbatim. For the comprehension and preference tasks, children marked their choices in a test booklet. For these tasks, the experimenter read all narratives and test items aloud individually to each subject. Items were repeated upon request. Very few requests were actually made. The four metaphor tasks are described in detail below.

Task Construction

For each verbal metaphor task, there were three context conditions: (a) sentence, (b) short story, and (c) short story with visual support. In the first condition, the metaphors were presented in sentences. No additional cues were provided. In the second condition, each metaphor was preceded by a short story that related to the figurative interpretation of the metaphor. For example, the metaphor "The trees disappeared like melting ice cream cones" was preceded by a story about riding on an airplane. The story was designed to aid the child in understanding that the trees became smaller and disappeared as the plane flew higher. To control for sentence length and complexity, a readability index was used to calculate the reading level of the stories (see Fry, 1977). Mean reading grade levels were 3.5 (range = 1.9 to 3.9) for the comprehension task, 3.0 (range =

2.5 to 4.0) for the preference task, and 3.0 (range = 2.6 to 4.1) for the completion task. Although the readability indices were slightly higher than some of the children's reading levels, the stories were well within the language competencies of the children. Note that all of the stories were read to the children; they were not asked to read the stories themselves.

In the third condition, each story was accompanied by a colored picture. To determine the composition of the pictures, 20 college students were asked to read the narratives and choose between two possible pictorial descriptions. The descriptions chosen by at least 75% of the students were then illustrated by a professional artist. Individual test items for the three verbal metaphor tasks were randomly assigned to each of the three context conditions. There were 8 metaphors in each context condition, making a total of 24 metaphors for each metaphor task. The presentation of the 24 metaphors was randomized. An example of the three context conditions from the comprehension task is presented below.

1. Sentence Context

I went into the kitchen and ate up a storm.

- I ate a lot.
- I drank some white lightning from the refrigerator.
- I ate so much it rained.
- I like to eat when it's raining.

2. Story Context

The little boy was flying on an airplane for the first time. The plane flew up into the sky. The boy looked out the airplane window. The

ground was moving farther away. The cars on the highway became smaller. Then the trees disappeared like melting ice cream cones.

- The trees lost their shape and disappeared slowly.
- Trees look a lot like ice cream cones.
- It was very hot, and the trees started melting.
- The trees melted and dripped down the trunk.

3. Story with Visual Support

I went walking through the house looking for the living room. The house was dark and gloomy. Finally, I found the living room and opened the door. In the corner of the room, I saw a coffin. I was scared. I walked slowly toward the coffin. I was amazed *my feet were brave enough to take me there*. (Presented with a picture of a frightened boy entering a dark room with a coffin in the corner opposite him.)

- I did not think I would have the courage to do it.
- My new sneakers made me feel I could do anything.
- My feet have a mind of their own.
- Somehow I was pulled to the coffin against my will.

Metaphor Tasks

The comprehension task consisted of 24 metaphors followed by four possible interpretations. An example was provided above. The actual metaphors were the same ones used by Pollio and Pollio (1979) in their study of metaphor development in nondisabled children. In that study, Pollio and Pollio distinguished between novel and frozen metaphors (e.g., "my feet were brave enough to take me there" vs. "ate up a storm"). In the present study, each context condition contained four frozen and four novel metaphors. Responses were scored as either correct or incorrect. The metaphoric interpretation was always the correct answer.

The 24 items for the preference task were adapted from a task developed by Silberstein et al. (1982). The task consisted of incomplete sentences followed by one literal, nonmetaphorical completion and four metaphorical completions. Subjects were asked to choose the best ending. The metaphorical completions were based on static-perceptual (color, shape), dynamic-perceptual (sound, movement), or conceptual features. Choices that combined two features were not

used. Responses were scored using a 4-point scale: 0 = literal choice, 1 = static-perceptual choice (e.g., color or shape), 2 = dynamic-perceptual choice (e.g., movement), and 3 = conceptual choice. A sample item is provided below:

The streetlights along the dark highway are ...

- a. fireflies in the air (color)
- b. lightbulbs on tall poles (literal)
- c. a connect-the-dots puzzle (shape)
- d. guards standing still at attention (movement)
- e. lonely people (conceptual)

A simile completion task was used to assess children's ability to produce metaphors. As indicated earlier, a simile is a variation of a metaphor that makes the comparison between the topic and vehicle more explicit through the use of the words *like* or *as* (e.g., "Mr. Jones was as mean as . . ."). The *Similes Test* (Schaefer, 1971) and the *Dictionary of Similes* (Wilstach, 1916) were used to obtain the 24 similes for this study. Children were instructed to make up endings for some poems. The term *poem* was used to encourage nonliteral responses.

Responses were scored using a 4-point scale adapted from Schaefer (1971): 0 = literal or inappropriate completions, 1 = poor or questionable responses, 2 = conventional metaphorical responses, and 3 = novel or unique metaphorical responses. For example, for the simile "Timmy was as happy as . . .," the response "as he had ever been in his life" was scored a 0. The response "as a bird" was given 1 point. "As a purring cat" was scored a 2, and "as a two-year-old getting an ice cream cone" was scored a 3. All responses were scored independently by the first author and a trained scorer. Agreement was 96.5%. Disagreements were resolved through discussion.

To ensure that all of the verbal metaphors used in the three verbal metaphor tasks were interpretable, these tasks were administered to 20 college students (different from the ones who determined the appropriateness of the pictures in the third context condition). The students completed all items correctly on the comprehension task and obtained mean scores of 2.75 and 2.5 on the preference and completion tasks, respectively.

The Metaphor Triads Task was developed by Kogan et al. (1980) to study the

development of metaphor abilities in a nonverbal format. The task consists of 29 sets of three pictures. Two of the pictures, when paired, represent a metaphorical similarity. The third picture in each set is similar to each member of the metaphor pair on some nonmetaphorical basis (e.g., categorical or functional). Children were asked to choose which of the two top pictures made the best pair with the bottom picture. The grounds of the metaphor pairings differed across items. Some metaphor connections were conceptual (pair: man and candle; ground: death), some visual (pair: snake and winding river; ground: shape), and some physiognomic-affective (pair: thunderstorm and angry man; ground: emotion). The procedures outlined by Kogan et al. were followed in administering the MTT.

Responses were scored according to the 3-point system devised by Kogan et al. (1980). A score of 0 was given if the subject failed to join the metaphor pair or explained a metaphor pair on a nonmetaphorical basis. A score of 1 was given when recognition of the metaphor pair was accompanied by an incomplete or inaccurate explanation of the metaphor ground. A score of 2 was given when the metaphor pair was recognized and a complete and accurate explanation of the pairing was provided. Responses were scored independently by the first author and trained scorer. Agreement was 94.5%. Disagreements were resolved through discussion.

RESULTS

The first set of analyses examined potential order effects. No significant differences were found between the two presentation orders. The data were therefore collapsed for the subsequent analyses.

Table 2 presents the data for the three verbal metaphor tasks according to group and context. Data for the comprehension task were analyzed with a 3 (context) \times 3 (group) \times 2 (metaphor type: frozen vs. novel) repeated measures analysis of variance. Context and group effects were analyzed for the other two tasks. Significant group differences were found for all three tasks: comprehension task, $F(2,33) = 12.9, p < .001$; preference task, $F(2,33) = 125.6, p < .001$; and completion task,

$F(2,33) = 55.5, p < .001$. Tukey post hoc analyses ($p < .05$) indicated that the nondisabled group performed significantly better than the LD-NLI group, who, in turn, performed significantly better than the LD-LI group. The context effect was not significant, nor were any of the interactions. On the comprehension task, the main effect for metaphor type was significant, $F(1,33) = 30.2, p < .001$, whereas the interactions with group and context were not significant. For all three contexts, children in each group produced significantly more correct responses for frozen metaphors than for novel metaphors.

Means and standard deviations for the MTT are presented at the bottom of Table 2. A one-way analysis of variance indicated that there was a significant difference among the three groups, $F(2,33) = 7.36, p = .002$. Unlike the group differences noted above, however, only the difference between the nondisabled and LD-LI groups reached significance (Tukey test, $p < .05$).

Error Patterns

No discernible error pattern was noted for the three groups on the comprehension task. On the preference and completion tasks, however, the LD-LI group showed a marked preference for literal endings. Ten children in the LD-LI group gave literal responses to all 24 items on the preference task. Ninety-four percent of the endings chosen by the LD-LI group were literal compared to 44% for the LD-NLI group and only 5% for the nondisabled group. On the completion task, 28% of the LD-LI group's endings were literal compared to 8% for the LD-NLI group and 2% for the nondisabled group. The LD-LI group also produced the greatest proportion of questionable comparisons (LD-LI = 24%, LD-NLI = 18%, nondisabled = 6%). Conventional metaphorical responses were the most frequent response type (LD-LI = 44%, LD-NLI = 68%, nondisabled = 65%). Expectedly, the nondisabled children provided the highest proportion of novel metaphors (nondisabled = 27%, LD-NLI = 6%, LD-LI = 4%).

On the MTT, children in the LD-LI group failed to select the correct pair 65% of the time compared to 42% for the nondisabled children. When the pair

TABLE 2
Group Mean Scores and Standard Deviations (SD) for the Three Verbal Metaphor Tasks by Context Condition and for the Metaphor Triads Task (MTT)

Task	Group					
	LD-LI		LD-NLI		Nondisabled	
	Mean	SD	Mean	SD	Mean	SD
<i>Comprehension (8)^a</i>						
Context 1	4.8	1.8	6.4	1.1	7.3	1.1
Context 2	5.6	1.2	6.0	0.8	6.9	1.3
Context 3	5.5	1.5	6.4	1.2	7.0	0.7
Total	15.9	3.2	18.8	2.4	21.2	2.0
<i>Preference (24)</i>						
Context 1	.06	1.7	7.1	5.1	12.8	2.8
Context 2	1.2	3.2	7.1	4.6	13.8	2.3
Context 3	0.6	2.0	6.5	5.0	14.8	2.5
Total	2.3	6.9	20.6	14.2	41.3	5.2
<i>Production (24)</i>						
Context 1	9.8	4.4	13.7	2.4	17.5	1.5
Context 2	10.1	3.6	13.9	2.7	18.4	2.1
Context 3	10.1	4.1	13.6	3.2	16.6	2.1
Total	30.0	10.6	41.2	7.3	52.5	4.5
MTT (58)	16.9	10.3	21.8	8.7	30.8	7.6

Note. LD-LI = learning disabled-language impaired; LD-NLI = LD-non-language-impaired.
^aNumbers in parentheses indicate maximum score possible per context condition and on the MTT.

was correctly identified, both groups tended to be able to provide accurate explanations of the metaphor grounds. Children in the LD-LI group produced insufficient explanations only 13% of the time compared to 9% for the nondisabled children.

DISCUSSION

Four tasks were used to evaluate metaphoric competence in children with LD with and without a previous history of spoken language impairment. The findings were quite straightforward. Children with learning disabilities who had a history of spoken language impairment consistently performed more poorly on the metaphoric tasks than children with learning disabilities who had no history of spoken language impairment. Both groups of children with learning disabilities showed less metaphoric competence than the nondisabled children. The error analyses indicated that LD-LI children produced a higher proportion of literal responses on the preference and completion tasks than the other children. The inferior performance of the LD-LI group was not limited to these two tasks. Children in this group also made the most errors on the comprehension task and on the MTT.

These findings are consistent with previous studies that have shown that most children with pre-school language impairments continue to have language deficiencies during elementary school and beyond (Aram, Ekelman, & Nation, 1984; Aram & Nation, 1980; King, Jones, & Lasky, 1982). The manifestation of the language impairment changes, however, as these children get older. In the early years, the language impairment is manifested in difficulty acquiring basic linguistic structures. In the latter years of elementary school, the impairment is manifested in difficulty with written language (Kamhi & Catts, 1989); figurative language (Nippold & Fey, 1983); narrative discourse (Liles, 1985; Merritt & Liles, 1987); and certain cognitive tasks (Johnston, 1987).

Children with learning disabilities who have no history of spoken language impairment are not immune, of course, to language learning deficits. Several years ago, a language deficit referred only to difficulty acquiring primary linguistic knowledge used in talking and understanding. In recent years, however, the language umbrella has been broadened to all aspects of learning that have a language component. These include meta-linguistic abilities, narrative and classroom discourse, figurative language, as

well as written language skills. Under this broad umbrella of language, only a small proportion of children with learning disabilities have a learning problem that does not involve some aspect of language. The term *language learning disabled* has been used by many writers in speech-language pathology to characterize children with learning disabilities who also have language learning difficulties (e.g., Wallach & Butler, 1984). The term is useful in focusing attention on the language bases of the learning disability. It is important to recognize, however, that the children described by this term may not be any more homogeneous than the supposedly more generic term, *learning disabled*.

The terminologic inconsistencies that pervade the study of children with learning disabilities will not be resolved in the near future. Inconsistencies can be tolerated, however, if the children described by a particular label are well defined. The findings from the present study suggest that it might be worthwhile to maintain a distinction between children with and without histories of spoken language impairment, for educational as well as research purposes. What these different groups of children are called is less important than recognizing that they might exhibit different patterns of language and learning competencies.

In addition to comparing the metaphoric abilities of LD-LI and LD-NLI children, we also questioned whether a story context and visual support would facilitate metaphoric competence. We thought that children with learning disabilities might benefit from contextual support more than the nondisabled children. The data could not have been more clear-cut. The story and pictorial contexts had no discernible effect on children's performance on any of the three verbal metaphor tasks. The lack of context effects for pictures was consistent with Billow's (1975) finding that pictorial cues did not improve children's explanations of metaphors. The lack of story context effects is inconsistent, however, with studies showing that linguistic context facilitates understanding of idioms and proverbs in children and adolescents (Ackerman, 1982; Nippold & Martin, 1989; Nippold et al., 1988). Possible reasons for the discrepancy in context ef-

fects are differences in the responses required (explanation, multiple choice, preference, completion) and differences in the type of figurative language studied (metaphor, idioms, proverbs). It is also possible that researchers who find context effects are simply more adept at constructing contexts that encourage nonliteral responses. Importantly, even when context effects are found, they are quite small (e.g., Nippold & Martin, 1989).

It should be apparent from this discussion that providing a linguistic or story context does not inherently predispose individuals to select nonliteral responses over literal ones. As indicated in the introduction to this article, metaphoric competence reflects an individual's cognitive level, abstract reasoning ability, and linguistic competence. The likelihood of selecting nonliteral responses depends primarily on these competencies but is also influenced by an individual's familiarity with the specific figurative forms being studied.

Future studies should attempt to better control for subjects' familiarity with specific figurative forms and also for the syntactic and semantic aspects of the metaphoric sentences. Such controls should help to unravel the effects of conceptual and linguistic knowledge as they relate to metaphoric competence. Different forms of figurative language, such as jokes and proverbs, might also be evaluated in children with learning disabilities. Comparisons between figurative language knowledge and other aspects of language performance, such as narrative and conversational discourse, might also prove worthwhile.

CONCLUSION

The novelist Walker Percy (1954) once pointed out that a metaphor is always wrong, literally speaking: It says that one thing is another, as in the suggestion that love is a rose or life's a beach. What is worse, he adds, is that oftentimes the best metaphors are the ones that are most wrong. For children with language and learning impairments, this almost seems unfair. After struggling for many years to become relatively competent in producing and understanding literal language, they now have to become com-

petent in producing and understanding metaphors and other forms of figurative language. Not surprisingly, they have difficulty developing this competence. It is not easy learning to differentiate between "wrongs" that are metaphoric and "wrongs" that are just wrong. Children with a history of spoken language impairment have even more difficulty developing metaphoric competence than children with learning disabilities who do not have a history of spoken language deficiencies. Moreover, contextual support, which offers some help in the comprehension of literal language, at best offers only slight help in facilitating metaphoric interpretations. In short, for children with learning disabilities, metaphors are truly a beach.

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AUTHORS' NOTE

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Notices

Call for Papers

The fourth meeting of the International Congress for School Effectiveness and Improvement will be held in Cardiff from January 4th-6th, 1991. Plenary sessions will include Judith Chapman (Australia), Michael Fullan (Canada), David Hargreaves (United Kingdom), and Peter Mortimore (United Kingdom). Symposia and paper proposals should preferably be submitted by October 15th and the latest date for reserving accommodation, etc. is December 1st. Further details are available from: The ICSEI Secretariat (attn. Lisa Parle), School of Education, University of Wales College of Cardiff, Cardiff, Great Britain; Tel: (44) 222 874000 extn. 5333. FAX: (44) 222 371921.

Job Mentoring Programs

For 3 years, the Foundation for Exceptional Children has been conducting a pilot program in which retired and older persons assist young people with disabilities to prepare for and find jobs. The program is called Team Work. The volunteer "mentors" are recruited and trained to assist youth, 18 to 25 years of age, who have graduated or left high school. With the help of the local school system, the youth are identified, interviewed, and selected for the program. Mentors assist the youth in the development of social skills, resume preparation, interview skills, job preparation, health needs, confidence building, and other needs. When the youth are ready for employment, the mentors assist the youth in finding a job and follow-up to help ensure their employment success. The Team Work concept was well received and was very successful in the pilot areas of Washington, DC, Maryland, and Virginia. The Foundation would now like to introduce Team Work to other communities in the United States. Persons or communities interested in starting a Team Work program are invited to contact the Foundation for Exceptional Children, 1920 Association Dr., Reston, VA 22091; or call 703/620-1054.