

CLINICAL FORUM

Clinical Forum

Why We Should Consider Pragmatics When Planning Treatment for Children Who Stutter

Amy L. Weiss

University of Iowa, Iowa City

It has been reported in the literature that speech-language pathologists (SLPs) are often uncomfortable recommending and performing direct intervention with children who stutter (CWS), fearing that such therapy may exacerbate stuttering (Brisk, Healey, & Hux, 1997; Kelly et al., 1997). According to some experts (S. Yaruss, personal communication, September 4, 2002; P. Zebrowski, personal communication, September 6, 2002), this concern probably stems from two issues. First,

ABSTRACT: Pragmatics, the use of language in context, has been investigated only recently in the language used by children who stutter (CWS). Historically, researchers compared the length and complexity of the syntactic constructions produced by these children with those of children who do not stutter (CWNS) and generally found the CWS to be relatively deficient. More recently, some investigators have begun to address how the language and fluency of CWS are influenced in different communicative settings. This article describes several findings concerning the pragmatic competencies of CWS set against the traditional framework of pragmatic language development. Most studies have shown no significant differences between the CWS and CWNS groups, although some aspects of pragmatic language use have yielded an exacerbation of stuttering for CWS. These findings have suggested specific ways of incorporating a pragmatic focus in the treatment programming for CWS where the degree of difficulty of language use is increased gradually.

KEY WORDS: stuttering, pragmatics, intervention

Johnson's (1959) diagnosogenic theory hypothesized that inadvertent or purposeful feedback that was provided to children stating that the production of disfluent speech was unacceptable would lead to stuttering. Although it has not been proven that parental input can exacerbate children's vulnerability for stuttering (Miles & Bernstein Ratner, 2001), the popularity of this theory may have contributed to clinicians' discomfort for direct stuttering treatment. Second, research has shown that many SLPs are dissatisfied with their preparation in the area of stuttering treatment with young children (Yaruss & Quesal, 2002).

The purpose of this article is to demonstrate that what SLPs know about children's developing pragmatic competencies can serve as an avenue to approach treatment planning for CWS. Given the reported reluctance of SLPs to directly address the stuttering behaviors of the CWS on their caseloads, it would be useful for SLPs to recognize how they can use their expertise in the area of language learning and language treatment as a useful adjunct for therapy programming for young CWS. A series of specific suggestions will be presented that SLPs may find helpful in managing caseloads with CWS. Most of the suggestions involve manipulation of conversations and other discourse types in ways that will be more or less challenging for CWS. Following these suggestions, there will be a description of a child who has been diagnosed as a stutterer whose therapy program contained a conversation-based focus.

¹Throughout this article, it is assumed that conversation is a reasonable context for therapy focus because all children in therapy will eventually have to incorporate their communication-facilitating strategies into this form of language use to reflect their activities of daily living (Weiss, 1993, 1995).

A DESCRIPTION OF THE PRAGMATIC COMPONENT OF LANGUAGE

A child's learning of the pragmatic component of language is not a trivial matter due to the many different aspects of pragmatics and the subtlety with which those aspects operate. Learning the pragmatics of language allows a young child to participate successfully in conversations. As a successful participant in conversations, children have opportunities to enrich their academic, as well as social and linguistic, development. The child who cannot differentially use language in context may be excluded from social interactions with peers or may be unable to request assistance from teachers during classroom activities. The former may negatively affect the quality of friendships developed; the latter may negatively impact the child's ability to use language for learning.

Roth and Spekman (1984a, 1984b) described pragmatics as a three-pronged system including (a) communicative intentions, the variety of goals for which the child can use language; (b) presupposition, assumptions about what the listener knows; and (c) organization of discourse, comprised of the subtle topic management maneuvers that ensure ongoing conversation. Critical to the model and the interconnections of the three parts of pragmatics is the context in which the language is occurring. By definition, pragmatics deals with the use of language in context. The authors stress that it is communicative context that influences the decisions that language users make in selecting the spoken message. In their set of articles, Roth and Spekman focused on the delineation of these three aspects of pragmatics, as well as suggested means to assess them. Their description of the components of pragmatics remains a clinically useful way to conceptualize children's developing abilities to use the language in their repertoire.

The pragmatics of the language system are most likely learned through the child's observation of what works and what does not work within the context of conversation by receiving both implicit (e.g., peer walks away) and explicit (e.g., peer says "I don't understand what you want.") feedback. People who pay little attention to the "other" in a conversation may have never learned the finer points of conversation management. These individuals are a challenge to deal with in a conversation context, such as when a topic is discussed without first being established, or when a speaker is interrupted before giving up the conversational floor. In mainstream American culture, at least one small portion of pragmatics, politeness, is often taught directly by caregivers (Snow, Perlmann, Gleason, & Hooshyar, 1990). Caregivers commonly report observing or participating in prompting young children to "say the magic word" (please) when making a request and to follow up a successful request with a sincere and immediate "thank you." These politeness examples are different from the indirect way that most of language is probably learned, that is, through presentation of incidental input from more linguistically competent conversational partners (Garvey, 1984; Snow & Ferguson, 1977).

Children are also learning alternation rules as part of what they learn about pragmatics (Ninio & Snow, 1999).

As they become more linguistically competent, they have in their expressive repertoires a number of different ways to communicate the same message. For example, they learn through experience that requests are more or less likely to be successful depending on the specific syntactic construction used, the directness or indirectness of the request, and their use of politeness markers. How do children learn to choose among these alternatives? Selection is probably based on the social status shared by the speaker and conversation partner, prior successful and unsuccessful experiences in similar requesting situations, their observation of others in similar situations, and for younger children, the urgency of the request, among other possible factors.

Weiss (2001) shared an example of an almost-3-year-old who asked for more cheese by saying to her aunt, "It seems like I don't have any more cheese on my plate." When queried as to why she had not asked for more cheese if that was what she wanted, the child replied, "Because that's the way I ask." Her chosen request form was indirect, and it had apparently worked well for her before, so it had become part of her repertoire. Coffee drinkers use alternation rules when selecting from among many possible alternatives to request more coffee from the person waiting their table at a restaurant, for example, "May I have some more coffee?" and "Fill 'er up." Thus, adults may also be more or less polite, more or less direct, and thus more or less successful in replenishing their cups.

One of the inherent difficulties of conversation management has to do with the unpredictability of conversations. As noted by Sacks, Schegloff, and Jefferson (1974), when one enters into a conversation, the number of turns are not specified, neither is the length of the turns or the number of participants in the conversation. Topics shift, as well. To be conversationally competent, a participant has to be ready to adjust quickly to the many variables presented by conversation partners. Thus, learning successful conversation management has many potential pitfalls, even for the child who is learning language in a normal fashion.

MEASURING PRAGMATIC AND COMMUNICATION COMPETENCE

Fey (1986) and others have argued that the young child's pragmatic competencies are an appropriate nexus for programming therapy for children with specific language impairment (Brinton & Fujiki, 1984, 1995) as well as other manifestations of language disorder found in children with autism (Conant, Budoff, Hecht, & Morse, 1984; Seibert & Oller, 1981) or mental retardation (Kaiser & Warren, 1988). In particular, Fey (1986) noted that the ability to use language in context is not necessarily reflected in the measurement of the child's syntactic output or vocabulary. For example, the child who is nonverbal can demonstrate through gesture and/or vocalizations an understanding of the basics of conversation, which is made up of opportunities to both provide information and respond to the information provided by others. Fey's approach to evaluating children's ability to demonstrate both conversational

assertiveness and responsiveness provides information that is helpful in designing therapy for the nonverbal child. When the exclusive focus is on their ability to produce grammatical sentences, children's language competencies, particularly in pragmatics, may be seriously underestimated.

According to Fey (1986), when children with language disorders recognize that conversation participation entails two distinct roles, one of initiator of communication (i.e., being assertive) and one of being responsive to the requests made, they bring to intervention the basis for learning the specific forms needed to communicate in an age-appropriate manner. A child can be communicative if he or she knows how to use whatever language tools are available, whether verbal or nonverbal, to participate as a conversation partner. Fey argued that when a child has a basic understanding of the mechanics of conversation turn-taking, it is much easier to facilitate language learning than it is for a child who does not recognize that successful participation in conversation requires both encoding messages and responding to requests for information, action, or clarification. Without this prerequisite knowledge about conversation, it is necessary to first teach the child's recognition that both assertiveness and responsiveness are roles to be played before targeting new forms. For the purposes of this article, it is proposed that Fey's perspective on the connection between pragmatics of conversation and normal language learning, with its utility for planning therapy for children who have disordered language, may also be useful when programming therapy for CWS.

CHILDREN'S DEVELOPMENT OF PRAGMATIC COMPETENCIES

The topic of children's development of pragmatic competencies could easily fill its own volume, and a comprehensive review of these is well beyond the scope of this article. The reader is referred to Ninio and Snow (1999) or Ochs and Schieffelin (1979) for more detailed reviews of the literature in this area. However, a review of several of the major accomplishments achieved early on by preschool-age and school-age children learning the pragmatics of their first language follows. This discussion provides the reader with evidence of the complexity of pragmatics and how quickly these competencies are acquired. Note that the addition of these pragmatic skills to children's language repertoires enhances their success as communicators in different communication contexts.

As Crystal (1987) suggested, language components are interrelated and codependent. Placing too much emphasis on one may have a detrimental effect on another. That is, when children are in an unfamiliar social context, their use of a new, complex syntactic form may contain errors. However, that same newly learned, complex syntactic form is more likely to be produced correctly in a familiar social context. Crystal specifically noted that when the syntactic demands on a language-learning child are increased, the ability to maintain fluency becomes more vulnerable. This notion has led investigators to question the presence of

trade-offs between language learning and fluency. If excessive demands on a child's syntax repertoire can have a negative effect on fluency maintenance, then it follows that excessive demands on pragmatic skills could also negatively affect fluency maintenance.

The developmental milestones selected have been organized according to the three aspects of pragmatics that were outlined by Roth and Spekman (1984a, 1984b). At the same time that children achieve these milestones, they are also making great strides in other areas of language learning such as syntax and semantics, as well as in their social-emotional, intellectual, and motor development.

Communicative Intentions

The general pattern of development is that not only does the number of different language functions in a child's expressive repertoire increase, but the ways the child has to express those functions also expands. Increased knowledge in the areas of semantics and syntax combine to make growth in the realm of communicative intentions possible. From approximately 12 to 24 months of age, children are combining gestures and true words to specify their communicative intentions (e.g., "that" + an outstretched hand to request a favorite toy just out of reach from someone with the ability to supply the toy) (Morford & Goldin-Meadow, 1992). By the time most normally developing children are 2 years of age, they are combining language functions within one utterance (e.g., "me want chocolate cookie" signifies both a request function as well as a description function) (Owens, 2001). By age 5, children are beginning to use language in many new and different ways to achieve communication goals. In particular, children are using language to express their feelings. They may use language to make suggestions, express their opinions, and request permission (Stephens, 1988).

As children enter the school-age years and adolescence, their repertoire of language functions also increases. It is not uncommon to find language used for persuasion, sarcasm, boasting, praising, telling jokes, or otherwise attempting to entertain listeners. These communicative intentions are useful adjuncts for developing and maintaining friendships with peers (Nippold, 1998).

Presupposition

Even at the one-word stage of language production, the specific choices children make to encode an event shows rudimentary knowledge of presupposition. This is an early demonstration of the "informativeness principle"—the recognition of the difference between given and new information and that to be communicative, the listener requires the newest information (Greenfield, 1978). Thus, if a child is shown a series of pictures with "Daddy" performing a number of actions, such as walking, eating, cleaning, and sleeping, and presuming that the child already has the words "walk," "eat," "clean," and "sleep" in his or her expressive repertoire (along with the word "Daddy"), the child at the single-word level will choose the action

words to describe the pictures, not "Daddy." In this case, "Daddy" is understood across action contexts and repeating it will add nothing.

Most children as young as 3 years of age show evidence of using different registers of language and speech depending on their listener (Anderson, 1992). For example, when talking to a younger and presumably less linguistically sophisticated child, children with normally developing language will alter their language by using less advanced syntax and vocabulary; some may use the prosodic varieties that are often associated with motherese that investigators believe gain and maintain the young child's attention. It is assumed that these examples of "code-switching" are used to enhance the success of the communication between the partners. Specifically, the switching of the codes is instigated by the child's assumption of what is necessary to ensure a successful conversation given the perceived communication needs of the conversation partner.

As children enter the school years, their ability to take the perspective of their listener also develops further. Whereas preschool children often use the size of their communication partner as a cue to determine how sophisticated their language can be and still maintain a successful dialogue, the older child uses more subtle nonverbal and verbal cues to determine whether the listener understands the speaker's intent. For example, in story-telling contexts, the school-age child learns to look for facial cues from the conversation partner or audience participant to determine whether the language selected was appropriate. The school-age child and adolescent are also learning to recognize ambiguity in their own and others' language so that they know when to clarify their own statements or to request clarification from others.

Nippold (1994) described how the maturation of the perspective-taking process allows the child to become more successful in both persuasion and negotiation. The school-age child and adolescent learn to use these competencies in both spoken and written modalities. According to Nippold (1994), successful persuasion begins with the child's ability to adjust to more than just the listener's size, but to take into account the age and status of the listener (or reader), as well as context familiarity (p. 2). In terms of developing successful negotiation skills, school-age children and adolescents become increasingly savvy in determining the communication partner's "needs, thoughts, and feelings" (Nippold, 1998, p. 190).

Discourse Competencies

The typical child at 3 years of age finds spontaneous speech easier to manage than conversation. In conversation, much of what is said is contingent on the demands of the previous speaker's utterance or turn, or on the nonlinguistic context of the conversation. However, the 3-year-old is beginning to make successful forays into conversational turn-taking (George & Krantz, 1981). By age 4, very little simultaneous talking (i.e., "simultalk") is observed, barring extraordinary circumstances (e.g., a preschool classmate taking the child's favorite toy truck without asking permission). In these situations, the role of waiting one's turn

may be quickly forgotten (Elias & Broerse, 1996). Depending on the choice of topic, of course, most children of 4 years of age can add an utterance that maintains an established topic of conversation. It has been noted that at this age, conversations become longer, with fewer new topics selected; that is, more turns are devoted to the same topic through topic maintenance (Brinton & Fujiki, 1984). Children have been shown to reliably recognize when communication breakdowns have occurred even when their own expressive language levels were quite restricted (Gallagher, 1977). Their repertoire of communication repair strategies develops as the child's communicative competence grows. For example, if a different lexical item is needed to clarify the utterance and fix the communication breakdown, the child provides a substitute word. Or, if reestablishment of the topic is needed, the child recognizes this and provides needed information for the conversation partner by using different syntactic structures. Even children with language impairments have been shown to follow this basic pattern (Gallagher & Darnton, 1978). All aspects of the learning of pragmatic competencies eventually enhance conversation or other discourse formats (e.g., narratives, expository discourse).

As children enter the school-age and adolescent years, they continue to develop their discourse competencies. Their ability to tell and write stories with complete story grammars that facilitate the story's comprehension will improve (Roth & Spekman, 1994). That is, not only do stories have logical beginnings, middles, and ends, but they contain more complex components, such as an "initiating event" that explains the problem faced by the main character or characters, and the reactions of the characters to their attempts at solving the problem faced (Stein & Glenn, 1979). Their conversations also become more complex as they begin to handle with more ease the unpredictability of the conversation context, with numbers of participants, topics, and turn lengths all unspecified (Sacks et al., 1974).

WHAT IS KNOWN ABOUT THE PRAGMATIC COMPETENCIES OF CWS?

CWS are learning strategies to enhance their ability to maintain fluent speech or stutter more easily outside of the therapy setting and in all contexts of their lives where language is needed. Therefore, it is logical that the conversation context is one in which therapy for these children will eventually progress. If SLPs do not look at their clients' performance in spontaneous conversation, how is it possible to determine whether strategies that are taught in the therapy room or classroom have carried over into contexts likely to be encountered on a day-to-day basis? A synopsis of a series of studies undertaken to address the pragmatic competencies of CWS follows.

Note that the purpose of looking at the pragmatic competencies of CWS is not that there is reason to believe that CWS are inherently disordered in this or any other aspect of language learning (Nippold, 1990). As part of the

general population, however, CWS are at least as likely as children who do not stutter (CWNS) to present with language-learning disorders or differences. As is reported by the authors of other articles within this forum, some recent data have suggested that there may be a propensity for delays or differences in certain areas of language learning for CWS when compared with CWNS, specifically in vocabulary or syntax development. One purpose of investigating the pragmatic competencies of CWS was to determine whether knowledge of CWS' use of language in context has relevant fluency treatment implications.

Communicative Intentions

Weiss and Zebrowski (1991) focused on the assertive and responsive acts used by the parents of CWS versus CWNS, not their children. The researchers' rationale was that parents of these two groups of children would be more similar than different in their speech and language characteristics, a perspective also explored by Meyers and Freeman (1985). Using Fey's (1986) taxonomy, the frequency of assertive acts, that is, statements, comments, requests, and disagreements, produced by one speaker in a conversation were compared with those produced by the partner to determine the degree to which a conversation was egalitarian, or equally shared. Similarly, proportions of how many appropriate responsive utterances were made relative to the actual number of requests made by the conversation partner provide a measure of how responsive one conversation participant was to the needs of another.

The conversation samples collected for the Weiss and Zebrowski (1991) study provided evidence to support the conclusion that the parents of both groups performed more similarly than differently in conversations with their children. That is, analyses revealed that both groups of parents performed quite similarly on these measures. Parents of the CWS were just as likely to take the lead in conversations with their children as were parents of the CWNS. Parents of the CWS were also not significantly different from parents of the CWNS in terms of their responsiveness to their children's requests. Results of this study demonstrated that as a group, parents, regardless of the fluency status of their children, managed conversations in a similar fashion, at least in terms of their use of assertiveness and responsiveness constructs. However, if the results had demonstrated that parents of CWS were less egalitarian and more overbearing in their conversation management styles than were parents of CWNS, this might have been hypothesized as relating to the exacerbation of children's disfluencies.

In a follow-up study, Weiss and Zebrowski (1992) investigated the quality and quantity of requests, one type of assertive act, that were directed to CWS and CWNS by their parents. It has been suggested that one tactic caregivers should take with CWS is to avoid asking questions, a common type of request structure (Gregory, 1990; Nelson, 1986). In the 1992 study, the frequency and type of requests directed by parents to their school-age CWS were compared with those produced by the parents of CWNS and directed to their children. When the two groups were compared, there

was no appreciable difference in the frequency or type of questions produced. In addition, the CWS were no more likely to be disfluent when responding to the requests made. Instead, the CWS were more likely to be disfluent when they themselves asked their parents questions.

The investigators concluded that a critical variable influencing fluency maintenance was the type of question asked by the parents and not the question itself. Questions vary in terms of the amount of responsibility required by the person providing the answer. For example, when CWS were asked choice questions, such as "Do you want the eggplant or the zucchini?" versus questions requiring causal explanations in their responses, such as "Why were you late coming home?", their tendency to stutter diminished. In the first case, two options for an answer were presented, leaving little responsibility to develop a unique answer. In the second case, there would be many different options for an answer, as well as the requirement for the child to provide causal information. Thus, the communication responsibility is greater in the second instance. The authors suggested that there was a connection between amount of responsibility for maintaining the conversational turn and the appearance of disfluencies. The impact of responsibility for a conversation act on the presence of disfluencies was not a new idea. Eisenson and Horowitz (1945) and Eisenson and Wells (1942) suggested this explanation 50 years before the Weiss and Zebrowski (1992) study; more recently, Stocker (1980) and Stocker and Usprich (1976) revived the same idea, calling it "level of demand." Stocker (1980) designed an assessment tool and treatment program around the gradual increase of demand level. Specifically, the more responsibility engendered for the speaker, the greater the likelihood for stuttering; the results of the Weiss and Zebrowski (1992) study provided additional support for these ideas.

These findings were also important because they have direct clinical application. Question-asking is not to blame for causing exacerbation of disfluencies. Rather, it is the specific choice of question posed that can be problematic. These findings call into question the practice of telling parents of CWS that they should avoid directing questions to their children. Questions have the advantage of turning the conversational floor over to young conversation partners, allowing them to practice their language. Moreover, question structures often inform the language-learning child of new vocabulary and new syntactic structures. If parents stop addressing questions to their children, the children might miss out on important language input. Instead, modifying question types according to the language and cognitive abilities of a CWS should increase the opportunities for question answering while minimizing excessive demand that may result in fluency breakdown. As SLPs, one of our responsibilities is to teach parents how to accomplish what might be a significant change in their usual discourse behaviors and explain the reasons why this change may be effective.

Presupposition

Little is known about the presuppositional competencies of CWS, and this remains an open area for research. The

question is, "Are CWS as aware as CWNS that they have to make alterations to their message in order to be understood by conversation partners at different levels of language expertise and topic knowledge?"

In an attempt to answer this question, Weiss and Zebrowski (1994) selected a story-retelling task. First, each CWS and CWNS in their study viewed a videotaped children's story along with the examiner. The CWS and the CWNS were then asked to retell the story twice—once to the examiner, with whom they had viewed the videotape, and once to another person whom they were told had not seen the videotape and was unfamiliar with the story. The authors' hypothesis was that if the children recognized the difference in the amount of shared information between themselves and the two different recipients of their story retellings, they would modify their stories for that difference. Specifically, the investigators hypothesized that the stories told to the naive listeners would be longer and more detailed than the stories told to the listeners who were familiar with the story.

In fact, the results revealed that as a group, all of the stories told by the CWS were shorter than those told by the CWNS, regardless of listener. Analyzing the stories told to the naive listeners by the CWS, however, demonstrated that these stories were somewhat longer than the stories that were told to the experienced listeners. When the stories produced by the children in both groups were evaluated for the essential information or "communication units" they contained rather than length, the groups looked very similar. That is, even though the CWS had produced shorter story retellings, the retellings included the critical information that allowed the listener to understand the main points of the story. One explanation offered by the authors was that stories told by the CWS may have been shorter because these children had learned that one good way to avoid stuttering was to talk less. More important, the CWS appeared to recognize the needs of their listeners and, although they may have sacrificed story length to avoid stuttering, they managed to economically include critical elements of the story.

Discourse Competencies

As mentioned above, discourse is a broad term encompassing many different ways that speakers produce text or connect sentences. Conversation is one type of discourse; the production or reproduction of stories is another. Expository text, used as a mechanism for explanation or opinion making (e.g., "How do you make the best cookies?"), is another form of discourse.

Several studies have focused on the conversations produced by CWS and have involved manipulation of three conversation variables and their relationship to exacerbating stuttering or diminishing the production of disfluent utterances. If these variables yielded rates of disfluency that were significantly different, then SLPs could be alerted to introduce these aspects of conversation into therapy planning in a systematic fashion. By doing so, CWS would gradually have to deal with the increasing challenges of conversation management.

Weiss and colleagues (1997; Weiss, Zebrowski, & Bernstein Ratner, 2002) reported a study that examined the effects of manipulation of conversational variables on the frequency of disfluencies. Variables included conversational structure, familiarity with the listener, and number of conversation partners. A group of CWS, matched with a group of CWNS by age, sex, and socioeconomic status (SES), were placed in three conversation groupings: paired with a parent (dyad), with an adult unfamiliar to them (dyad), or both simultaneously (triad). Half of the time, the videotaped conversations were goal oriented or structured (i.e., putting together a Lego figure or completing a puzzle), and for the other portion of sample collection, the conversations were unstructured (i.e., the participants were told to talk about any topic of their choosing.)

The three variables—familiar conversation partner versus unfamiliar conversation partner, structured versus unstructured conversation context, and dyadic versus triadic conversation—were selected because empirical or anecdotal literature has suggested that these variables would likely yield significant differences in the CWS' ability to maintain fluency control. It was hypothesized that with familiar conversation partners, there would be more shared information and less of a need to provide the explicit information that unfamiliar partners would require. Thus, in conversations with the familiar partner (i.e., a parent), there would be less disfluency produced. The investigators hypothesized that dyadic conversations would require less concentration to determine turn allocation than would conversations with three participants, and therefore less disfluency would be produced. Last, it was proposed that the unstructured conversations would yield more disfluencies because the topic of the conversation was not dictated and thus more responsibility for determining the direction of the conversation was left to the participants.

The results of the study yielded significant findings for only one of the main variables tested—the structure of the conversation—and this occurred in the predicted direction, with the CWS group producing significantly more disfluent utterances than in the structured conversations. Neither manipulation of the familiarity with the conversation partner nor number of conversation participants resulted in a significant difference in the number of disfluent utterances produced. Another important result of this study was the contribution of corroborating data to the already reported finding that CWS were more likely to produce disfluencies as the length and complexity of their utterances increased (Bernstein Ratner & Sih, 1987; Gaines, Runyan, & Meyers, 1991; Logan & Conture, 1995).

In addition to the Weiss and Zebrowski (1994) study reviewed under the heading of presuppositional skills, two additional investigations have looked at the narrative abilities of CWS. Nippold, Schwarz, and Jescheniak (1991) investigated the narrative abilities of a group of 20 school-age children, half of whom had been diagnosed as CWS. Using a story-retelling paradigm, the subjects were played an audiotape of two different multi-episodic stories borrowed from Merritt and Liles (1987) and were then asked to retell one story to the examiner and write out the other. Stories produced by the two groups were compared,

and no significant differences were found for story length and complexity, regardless of the modality of the retelling. Similarly, the two subject groups demonstrated no statistically significant differences in terms of their production of story grammar components, use of episodes, and comprehension of the stories. The authors concluded that, although preliminary, their findings did not support the hypothesis that CWS necessarily have disordered language skills. However, they cautioned that their group findings had the potential of obscuring individual differences in the participants' performances.

A study by Scott, Healey, and Norris (1995) compared the performances of a group of CWS and a matched group of CWNS on a story-retelling task. After they were twice told a story with the support of eight sequenced pictures, the children were asked to replicate the story to the examiner who had originally presented them the story. The retold stories were analyzed for their inclusion and accuracy of "critical details" (p. 284), the story grammar components defined by Stein and Glenn (1979), and a score was derived. The presence of disfluencies during the story-retelling task was also assessed. Although there were no statistically significant differences between the two groups of children in terms of their narrative scores, Scott et al. noted that when individual children's narratives were compared to normative data and the ability of the children to express the story's meanings clearly, three subgroupings of CWS emerged. Half of the CWS produced story retellings that were similar to the CWNS group in both structure and clarity. That is, according to the authors, these CWS were not impeded in their ability to produce age-appropriate narrative by their fluency disorder. Two of the CWS, however, produced narratives that fell below age-level expectations for sophistication of structure and were affected negatively by their disfluencies. The remaining 4 subjects produced narratives that were age appropriate, but these CWS had a difficult time expressing their stories due to their propensity for stuttering. Scott and her colleagues concluded that the appearance of three subgroups could be interpreted as meaning that for some CWS, there was an interconnection between the fluency disorder and subtle language impairment. Specifically, the demand of formulating a cohesive, clearly expressed narrative may be particularly difficult for some CWS for whom language is an added challenge to the ability to maintain fluency.

A CAVEAT FOR THERAPY PLANNING

When analyzing the results of any group design study for its applicability to therapy planning, it is important to remember that results reflect the behavior of the group and do not reflect the performance of individual subjects. Nippold et al. (1991) and Scott et al. (1995) reflected that perspective when drawing the conclusions of their study. The SLP's question is, "To what extent do my client's speech and language behaviors match those of the subjects who most closely represented and accounted for the reported positive outcome?" That is, not every one of the

CWS in the Weiss and Zebrowski (1997) study contributed equally to the outcome that unstructured conversation contexts were significantly more likely to exacerbate the occurrence of disfluencies. Similarly, for some of the CWS who participated in this study, it is quite likely that the difference between a dyadic versus a triadic conversation did increase the presence of disfluencies, although this was not a group effect. For SLPs who are consumers of research to further their evidence-based practice, a distinction between group results and what is best for their individual clients must be made.

Let us assume that the interface between stuttering and pragmatics is a viable one, although it is prudent to note that the connection may be more or less important for the treatment planning of a particular CWS. Age and language competencies may determine how important a consideration pragmatics is. As noted by Silverman and Ratner (1997), school-age children and adolescents who stutter may be more influenced by the contextual or pragmatic demands of a speaking situation in their attempts to maintain fluency than will younger children. These investigators concluded that with younger, less linguistically sophisticated children, demands on their semantic and syntactic knowledge are more likely to negatively impact their ability to maintain fluency than are contextual challenges. It is also important to remember that many practitioners, by directly addressing the fears that some persons who stutter (PWS) have in conversations or public speaking (Ramig & Bennett, 1997), are, in effect, focusing on differences in speaking performance across contexts. Thus, to suggest that incorporation of pragmatics into treatment for stuttering is totally new would not be fair to more traditional programs. However, it is undeniable that context matters and, in particular, one aspect of pragmatics, conversation, as well as other types of discourse, is omnipresent in our lives. How does an SLP go about using this information?

PROTOCOL FOR CWS: CONSIDERING THE PRAGMATICS/STUTTERING INTERFACE

There are several steps that can be followed for incorporating the interconnectedness between pragmatics and stuttering into therapy planning. The general steps outlined represent one example of how CWS can benefit from this incorporation. Of course, a creative SLP can develop variations on these themes to individualize treatment based on clients' interests and goals. The suggestion is to embed a pragmatics focus within a fluency treatment program that has already been shown to be empirically sound. Some SLPs may view these suggestions as procedures that they have already used in their fluency treatment regimen.

First, determine if the client's language competencies are age appropriate. The question the clinician wants to answer is, "Do CWS have the necessary prerequisites to participate competently in conversations?" Consider all language components in comprehension and production as well as pragmatics (evaluate semantics, phonology, syntax/morphology). To make the determination of competence, it will

probably be necessary to employ nonstandardized probes that have been specially designed to evaluate pragmatic abilities (Weiss, 2001). Most available standardized tests either do not focus on pragmatics, or by their very nature do not allow for observation of a client's spontaneous language use in different settings with minimal interference by the SLP. If the client is demonstrating concomitant deficits in specific areas of language competence, one must determine the extent to which they impinge on his or her ability to maintain individual fluency goals in conversation contexts. Then, the SLP should provide or recommend therapy in the language areas needed. When performing deep testing, it is important to determine if there is some technique or combination of techniques that the SLP can use to compensate for these deficiencies by providing additional stimulus support (e.g., prompting and cuing of the topic, suggestions for relevant vocabulary).

A second major consideration is to determine if additional stimulus support is needed to maintain fluency or easy speech and, if so, what manner of support would be useful? To this end, it is essential to select conversation topics that consider your client's expertise. Conversations that focus on topics and incorporate vocabulary that are familiar to the client are less likely to be taxing to the client's ability to maintain fluency than are the selection of topics and use of vocabulary the client knows little about. In addition, familiar topics are liable to generate conversations with multiple topic maintenance turns, which is a reflection of a mature conversation style. The SLP should recognize that the more unstructured the conversation context, the greater the "pragmatic burden" on the client and the more likely that disfluencies will be produced. It is important to take the client's perspective in terms of structure. That is, what appears to the SLP to be a structured, predictable conversation context may be too unstructured for the client to manage easily. The SLP can experiment with (a) introducing likely vocabulary (i.e., "core vocabulary"), (b) introducing potentially suitable or useful topics (before the start of any conversation), or (c) using story-retelling techniques to introduce or "prime" the client with the language to be used. As noted in many research studies, there is a close relationship between disfluent speech and the length and complexity of sentences. Thus, clinicians can also experiment with creating speaking contexts for the client that require longer and more syntactically complex contributions. This latter suggestion may cause more problems for younger and less language-skilled clients than for older school-age and adolescent clients (Silverman & Ratner, 1997).

As a third step, the SLP should determine how to use conversation as part of the therapy plan or if the client is even ready for this challenge. Once the client is ready, the clinician should determine how much challenge can be tolerated. This means that the client should experience successful communication most of the time with an appropriate amount of support from the SLP. Given the naturalistic aspects of conversation, it is appropriate to set aside some time for conversation tasks during each therapy session. Data collected at the beginning and end of the session will capture baseline and progress, respectively,

with both providing the clinician with evidence of transfer of fluency-altering strategies to a less structured context than found in other portions of the therapy session. Eventually, conversation becomes the "proof of the pudding" in determining the success or failure of the therapy planned for CWS. It is likely that as the client attains more control over fluency or fluency-enhancing strategies, conversation-based activities will constitute more and more of the treatment session.

The SLP can experiment with ways to increase the degree of difficulty in the conversation context. For some clients, the addition of conversation partners, especially conversation partners who are unfamiliar to them, will be sufficient to create a challenge for fluency maintenance. It may also make sense to begin with structured conversation contexts and gradually move to less structured conversation contexts. The degree of difficulty of the task can be increased by asking the client to select the topic of conversation and to take more responsibility for planning the conversation agenda for the session. When topics are more familiar to the child, the assumption is that there is a reduced cognitive load for the task as opposed to situations where there is less or no familiarity with the topic suggested. The goal is to gradually increase the amount of time spent in the therapy session engaged in conversation and to vary the specifics of the conversation text during the session. For example, within a conversation, the clinician could provide the client with opportunities to negotiate a solution to a problem or to persuade conversation partners to change their minds about some issue. These latter discourse types, persuasion and negotiation, are typically reserved for the older school-age or adolescent client.

The SLP should keep track of changes in the client's ability to self-monitor his or her own use of fluency-enhancing strategies in conversation tasks and the clients' ratings of their success. The client could rate the overall acceptability of the pragmatic aspects of the conversation as well. The clinician could ask if the client is satisfied with the communicative role he or she played in addition to the degree of fluency that resulted. That is, was the client able to convey the information that he or she wanted to convey or, instead, was the conversation shaped by the client's needs to maintain fluent speech? If the latter was true, the clinician should ask the client to stop when this occurs and to brainstorm on ways to change this outcome. For example, did the client not ask a question even though clarification was needed from the conversation partner because the client was concerned about stuttering? Avoidance can occur at the discourse level as well. Having a dual focus on pragmatics and fluency provides the SLP with the perfect opportunity to make the case that despite problems with disfluent speech, it is important to emphasize the message. Assisting the client to be a better communicator, "bumpy" speech or not, is the goal of this therapy approach.

Because conversation is only one type of discourse, the SLP could plan to add narrative and expository tasks to the treatment plan. A very challenging approach to story telling is to create stories in a collaborative manner, where the client and clinician take turns creating a portion of the

story. Less challenging would be to use a story-retelling task (as used by Weiss & Zebrowski, 1994) with visual stimuli. This places less of a burden on the client's memory and provides cues for vocabulary, as well as the sequencing of events. Finally, it is important to monitor the client's success in using conversations and other discourse types as needed outside of the therapy setting.

If the client's age and maturity permit, the SLP can have the child keep a diary of a sampling of the conversations that transpired between treatment sessions. The client would then chart the number of conversation partners, their relative familiarity to the client, the general topic(s) of the conversation, the conversation's relative length (turn-wise or time-wise), and the perceived effectiveness of the conversation in terms of communicative success. The clinician would look for patterns of success and draw consensus about what parameters appear to positively and negatively affect success (e.g., relative fluency vs. listeners understanding the message). As a CWS moves through the program, criteria for fluency must be met before more challenging communication contexts are attempted.

These suggestions follow general intervention principles and take advantage of the specific information that studies of pragmatics and CWS have produced. The following is an example of the implementation of these suggestions if they were to be applied to an individual CWS receiving therapy.

A CASE DESCRIPTION OF A CWS: INCORPORATION OF CONVERSATION-BASED THERAPY

G was a 10-year-old male with a history of stuttering. First diagnosed and subsequently enrolled in therapy when he was 4 years of age, *G* appeared to have no language comprehension or production difficulties, with the exception of /s/ distortions that were observed inconsistently in connected speech. The child generally appeared to be unaware of these sound distortions unless they were brought to his attention. However, he was aware of his disfluencies, and according to both his mother (his primary caregiver) and the child himself, *G* avoided certain speaking situations. For the last 3 years, he had received individual speech therapy once per week (via "pull-out" model) through his school district. From age 4 through age 7, *G* was taken to a university clinic for therapy twice weekly, where the emphasis of his treatment was to have him identify when he stuttered and to experiment with stuttering more easily with less visible oral tension. This guided experimentation involved use of desensitization techniques such as those described by Guitar (1998). *G*'s SLP reported that although the child was usually fluent during his sessions in the therapy room, her observations of him outside of the therapy room showed that he had difficulty using his strategies to reduce disfluencies or to produce his fluencies in an easier manner.

Unfortunately for *G*, his teachers often called on students in class whether or not they had raised their hands to contribute. This situation had greatly increased *G*'s

anxiety about attending school. He expressed that not only was he afraid of stuttering in front of his teachers when called on, but he was convinced that his classmates believed he was mentally challenged because he stuttered. *G* had few friends. His teachers mentioned that *G* was not one of the more popular boys in his class and that he spent most of his classroom social time alone, with one or two classmates, or with younger children. When asked if *G* participated in classroom discussions or in conversation outside of the classroom (e.g., with his friends on the playground), his teachers all responded that *G* was best characterized as a "loner" who rarely spoke unless spoken to.

Planning a Pragmatic-Focused Treatment Program for *G*

Assuming that the SLP wanted to infuse a language-stuttering interface into this child's therapy plan, the following are some options for starting treatment. First, the clinician would determine if there was any additional information needed before planning *G*'s therapy program. Then, based on any additional information the SLP might glean from observing or testing *G*, the SLP would collect updated information regarding the severity of stuttering, perhaps evaluate the client's attitudes toward stuttering, as well as determine if the child demonstrates age-appropriate receptive and expressive language competencies.

G's history indicated that he avoided conversation contexts and that this avoidance had a clear, negative relationship to his social, and potentially academic, status. It appeared from the reports of the SLPs who had worked with *G* that he maintained his fluency goals satisfactorily within the therapy setting. For *G*, this meant outside of the classroom in an individual therapy room. However, he had not demonstrated carryover of his fluency strategies to the classroom, to the playground, or to his home environments. Given the pervasiveness of conversation settings, *G* would have had to have been significantly restricted in his daily use of language if he was only minimally participating in discourse tasks.

Because *G* did not demonstrate any concomitant language problems with the exception of an inconsistent /s/ distortion, which was not likely to be too detrimental to intelligibility, it was likely that he had the preliminary communicative competencies to use a conversation-based approach for therapy. The persistence of the inconsistent /s/ distortion, however, may have indicated that *G* was not capable of the careful monitoring of his speech and language performance that an SLP would like to see if asking him to also carefully monitor aspects of his conversation participation. It is likely that to facilitate *G*'s success in therapy, the SLP would need to add a training component to help *G* identify his disfluencies within conversations or other discourse tasks. At this point in the process, it was not clear how motivated *G* was to pursue therapy. His willingness to take the risk of exposing his disfluencies in different practice conversation tasks, however, was anticipated to contribute to the ultimate prognosis for therapeutic success.

Initial Pragmatic Goal-Setting for *G*

Initial pragmatic goals for *G* were developed based on consideration of *G*'s use of assertive and responsive acts across contexts. The SLP's mission is to obtain several conversational samples collected in conversations between *G* and several different conversation partners, where possible. Thus, samples were collected with *G*'s primary caregiver, a neighborhood friend, the child's younger brother, and his teacher, to provide useful data across several conversation contexts. These conversations were evaluated to determine if *G* demonstrated use of assertive and responsive conversation acts (see Fey, 1986). The SLP should note that if *G* often served as an initiator of conversations and responded appropriately to requests made of him in all or most of the conversation samples collected, the clinician may proceed to the second goal with the assurance that *G* understands and can perform the two basic functions of conversation. If, by age 10, *G* had not demonstrated the ability to be both assertive and responsive, it is possible that his lack of participation was due to concerns about fluency management and not because he lacked cognizance of these critical conversation roles. Of course, the SLP should monitor these different conversation samples for evidence of more or less fluency. Moving on to more challenging conversation contexts implies the child's ability to reach the fluency goals set for him in conversations with a variety of participants.

G's Selection of Topics of Conversation

The clinician would begin by having *G* select the topic of conversation or an activity to use his fluency strategies. This activity could involve putting a puzzle together, building something from a prepared kit, and so forth. *G* would be provided with several choices of topic or activity if he is unable to develop one on his own. It is important that the basis for the conversation be a structured one. *G*'s special interests would be used as a guide to select a topic that he knows well enough to contribute to an ongoing conversation over several turns. It can also be advantageous to select a topic that the SLP does not know as much about, but the CWS does. This will set up a sincere situation where information is needed. It is proposed that one topic per 10–20-min segment of therapy is a reasonable amount of time for this activity. The clinician would adjust this topic to time ratio as needed as the demand for conversation participation begins to negatively affect fluency management goals.

If the turn-taking of the conversation appears to trigger disfluencies, one intermediate step would be to have *G* tell a monologue or story based on the topic selected. Another intermediate step would be to rehearse likely vocabulary and contributions to the conversation for each of the two partners conversing on this topic. If this activity is very easy for *G* and he is able to use his strategies to maintain fluency or easy speech, and there is no evidence of his avoiding saying what he wants to say, you can increase the degree of difficulty by choosing a random topic for *G* (e.g., "Let's talk about X.").

Targeting Other Topic Manipulations

When *G* has mastered topic initiation, topic maintenance, and topic change in a structured conversation dyad with the SLP, the next goal is to add conversation partners to this structured context. The SLP would add persons who are both familiar and unfamiliar to *G*. In other words, degrees of difficulty would be added to increase the challenge to *G*. His ability to handle these additional challenges would be monitored, and their difficulty could be increased or decreased accordingly. When referring to "handling challenges," the key is the child's ability to not only participate appropriately in more complex discourse contexts, but to do so at the same time as achieving the predetermined fluency management goals.

Increasing the Challenge

G's use of fluency-maintenance strategies would be challenged further by changing the setting of the structured conversations. The clinician could move the conversations out of the therapy room and into the classroom, where the SLP, in collaboration with the teacher and the child's family, can monitor *G*'s attempts to converse more spontaneously with both his classmates and family members at home. Use of confederates, *G*'s classroom peers who are willing to participate in these structured conversations with *G*, will increase the task's degree of difficulty. As the child becomes better able to use his fluency strategies with his classmates, random conversation partners can be incorporated. The rate of changing conversation topics and the number of conversation partners can also be increased. The more conversation partners involved, the less obvious turn designation is.

Once structured conversation contexts have been mastered, it is time to move to less structured conversations and other types of discourse, such as narrative, expository text, and tasks requiring persuasion or negotiation. Mastery is demonstrated by *G*'s ease of participation and the consensus between the SLP and *G* that he is recognizing places in the conversation where he may be experiencing difficulties with fluency management, as well as conversation management. More traditional stuttering modification approaches can be incorporated in these contexts.

A Family-Centered Approach

It is important to keep the family apprised of the child's treatment goals and changes in both conversation management and fluency expectations for *G*. Sometimes, direct observation of therapy sessions is the most successful way to accomplish this. The SLP can suggest ways that the family can reflect these expectations at home with opportunities for conversation with family members. Family members can be taught to keep data from at-home activities that can be used by the SLP as a basis for gauging *G*'s generalization of his skills into other settings and to monitor *G*'s progress over time.

CONCLUSION

This case description incorporated information from what is known about children's development of pragmatic competencies, as well as what has been reported about the pragmatic abilities of young CWS. SLPs considering this approach will note that the suggestions made follow the traditional therapeutic procedure of gradually increasing the challenge of the tasks presented to the client as treatment progresses. Because of the familiarity of language-based approaches in general, the therapeutic strategies outlined here may provide some additional comfort to SLPs with CWS on their caseloads. It is not being suggested that the SLP who requires additional information in the area of stuttering should not pursue workshops, short courses, and the like, to provide the necessary foundation for evaluating and treating CWS. On the contrary, the purpose of this article was to make a connection between treatments of CWS and some aspects of language treatment programs. By acknowledging the relevance of pragmatics in planning a treatment program for CWS, the SLP focuses treatment on the "big picture," which is always the enhancement of the client's ability to communicate in activities of daily living.

REFERENCES

- Anderson, E. (1992). *Speaking with style: The sociolinguistic skills of children*. London: Routledge.
- Bernstein Ratner, N., & Sih, C. (1987). Effects of gradual increases in sentence length on children's disfluency. *Journal of Speech and Hearing Disorders*, 48, 226-246.
- Brinton, B., & Fujiki, M. (1984). Development of topic manipulation skills in discourse. *Journal of Speech and Hearing Research*, 29, 350-358.
- Brinton, B., & Fujiki, M. (1995). Conversational intervention with children with specific language impairment. In M. Fey, J. Windsor, & S. Warren (Eds.), *Language intervention: Preschool through elementary years* (pp. 183-212). Baltimore: Paul H. Brookes.
- Brisk, D., Healey, C., & Hux, K. (1997). Clinicians' training and confidence associated with treating school-age children who stutter: A national survey. *Language, Speech, and Hearing Services in Schools*, 28, 164-176.
- Conant, S., Budoff, M., Hecht, B., & Morse, R. (1984). Language intervention: A pragmatic approach. *Journal of Autism and Developmental Disorders*, 14, 301-317.
- Crystal, D. (1987). Towards a "bucket" theory of language disability: Taking account of interaction between linguistic levels. *Clinical Linguistics and Phonetics*, 1, 7-22.
- Eisenson, J., & Horowitz, E. (1945). The influence of propositionality on stuttering. *Journal of Speech Disorders*, 10, 193-197.
- Eisenson, J., & Wells, C. (1942). A study of the influence of communicative responsibility in a choral speech situation for stutterers. *Journal of Speech Disorders*, 7, 259-262.
- Elias, G., & Broerse, J. (1996). Developmental changes in the incidence and likelihood of simultaneous talk during the first two years: A question of function. *Journal of Child Language*, 23, 201-217.
- Fey, M. (1986). *Language intervention with young children*. Boston: Allyn & Bacon.
- Gaines, N., Runyan, C., & Meyers, S. (1991). A comparison of young stutterers' fluent versus stuttered utterances on measures of length and complexity. *Journal of Speech and Hearing Research*, 34, 37-42.
- Gallagher, T. (1977). Revision behaviors in the speech of normal children. *Journal of Speech and Hearing Research*, 20, 303-318.
- Gallagher, T., & Darnton, B. (1978). Conversational aspects of the speech of language-disordered children: Revision behaviors. *Journal of Speech and Hearing Research*, 21, 118-135.
- Garvey, C. (1984). *Children's talk*. Cambridge, MA: Harvard University Press.
- George, S., & Krantz, M. (1981). The effects of preferred partnerships on communication adequacy. *Journal of Psychology*, 109, 245-253.
- Greenfield, P. (1978). Informativeness, presupposition, and semantic choice in single-word utterances. In N. Waterson & C. Snow (Eds.), *The development of communication* (pp. 443-452). New York: Wiley.
- Gregory, H. (1990). What is involved in therapy? In E. Conture & J. Fraser (Eds.), *Stuttering and your child: Questions and answers*. Memphis, TN: The Speech Foundation of America.
- Guitar, B. (1998). *Stuttering: An integrated approach to its nature and treatment* (2nd ed.). Baltimore: Williams & Wilkins.
- Johnson, W. (1959). *The onset of stuttering*. Minneapolis: The University of Minnesota Press.
- Kaiser, A., & Warren, S. (1988). Pragmatics and generalization. In R. Schiefelbusch & L. Lloyd (Eds.), *Language perspectives: Acquisition, retardation, and intervention* (pp. 393-442). Austin, TX: Pro-Ed.
- Kelly, E., Martin, J., Baker, K., Rivera, N., Bishop, J., Krizizke, C., et al. (1997). Academic and clinical preparation and practices of school speech-language pathologists with people who stutter. *Language, Speech, and Hearing Services in Schools*, 28, 195-212.
- Logan, K., & Conture, E. (1995). Length, grammatical complexity, and rate differences in stuttered and fluent conversational utterances of children who stutter. *Journal of Fluency Disorders*, 20, 35-61.
- Merritt, D., & Liles, B. (1987). Story grammar ability in children with and without language disorder: Story generation, story retelling, and story comprehension. *Journal of Speech and Hearing Research*, 30, 539-552.
- Meyers, S., & Freeman, F. (1985). Are mothers of stutterers different? An investigation of social-communicative interaction. *Journal of Fluency Disorders*, 10, 193-209.
- Miles, S., & Bernstein Ratner, N. (2001). Parental language input to children at stuttering onset. *Journal of Speech, Language, and Hearing Research*, 44, 1116-1130.
- Morford, M., & Goldin-Meadow, S. (1992). Comprehension and production of gesture in combination with speech in one-word speakers. *Journal of Child Language*, 19, 559-580.
- Nelson, L. (1986). Language formulation related to dysfluency and stuttering. In H. Gregory (Ed.), *Stuttering therapy: Prevention and intervention with children* (pp. 19-38). Memphis, TN: The Speech Foundation of America.
- Ninio, A., & Snow, C. (1999). The development of pragmatics: Learning to use language appropriately. In W. Ritchie & T.

- Bhatia (Eds.), *Handbook of child language acquisition* (pp. 347–386). New York: Academic Press.
- Nippold, M.** (1990). Concomitant speech and language disorders in stuttering children: A critique of the literature. *Journal of Speech and Hearing Disorders, 55*, 51–60.
- Nippold, M.** (1994). Persuasive talk in social contexts: Development, assessment, and intervention. *Topics in Language Disorders, 14*(3), 1–12.
- Nippold, M.** (1998). *Later language development: The school age and adolescent years* (2nd ed.). Austin, TX: Pro-Ed.
- Nippold, M., Schwarz, I., & Jescheniak, J.** (1991). Narrative ability in school-age stuttering boys: A preliminary investigation. *Journal of Fluency Disorders, 16*, 289–308.
- Ochs, E., & Schieffelin, B.** (Eds.). (1979). *Developmental pragmatics*. New York: Academic Press.
- Owens, R., Jr.** (2001). *Language development: An introduction* (5th ed.). Boston: Allyn & Bacon.
- Ramig, P., & Bennett, E.** (1997). Clinical management of children: Direct management strategies. In R. Curlee & G. Siegel (Eds.), *Nature and treatment of stuttering: New directions* (pp. 292–312). Boston: Allyn and Bacon.
- Roth, F., & Spekman, N.** (1984a). Assessing the pragmatic abilities of children: Part 1. Organizational framework and assessment parameters. *Journal of Speech and Hearing Disorders, 49*, 2–11.
- Roth, F., & Spekman, N.** (1984b). Assessing the pragmatic abilities of children: Part 2. Guidelines, considerations, and specific evaluation procedures. *Journal of Speech and Hearing Disorders, 49*, 12–17.
- Roth, F., & Spekman, N.** (1994). Oral story production in adults with learning disabilities. In R. Bloom, L. Obler, S. DeSanti, & J. Ehrlich (Eds.), *Discourse analysis and applications: Studies from adult clinical populations* (pp. 131–147). Hillsdale, NJ: Erlbaum.
- Sacks, H., Schegloff, E., & Jefferson, G.** (1974). A simplest systematics for the organization of turn-taking in conversation. *Language, 50*, 696–735.
- Scott, L., Healey, E., & Norris, J.** (1995). A comparison between children who stutter and their normally fluent peers on a story retelling task. *Journal of Fluency Disorders, 20*, 279–292.
- Seibert, J., & Oller, D.** (1981). Linguistic pragmatics and language intervention strategies. *Journal of Autism and Developmental Disorders, 11*, 75–88.
- Silverman, S., & Ratner, N.** (1997). Syntactic complexity, fluency, and accuracy of sentence imitation in adolescence. *Journal of Speech, Language, and Hearing Research, 40*, 95–106.
- Snow, C., & Ferguson, C.** (Eds.). (1977). *Talking to children: Language input and acquisition*. Cambridge, MA: Cambridge University Press.
- Snow, C., Perlmann, R., Gleason, J., & Hooshyar, N.** (1990). Developmental perspectives on politeness: Sources of children's knowledge. *Journal of Pragmatics, 14*, 289–305.
- Stein, N., & Glenn, C.** (1979). An analysis of story comprehension in elementary school children. In R. Freedle (Ed.), *New directions in discourse processing* (pp. 53–120). Norwood, NJ: Ablex.
- Stephens, I.** (1988). Pragmatics. In M. Nippold (Ed.), *Later language development* (pp. 247–262). San Diego, CA: College Hill Press.
- Stocker, B.** (1980). *The Stocker probe technique for diagnosis and treatment of stuttering in young children*. Tulsa, OK: Modern Education.
- Stocker, B., & Usprich, C.** (1976). Stuttering in young children and level of demand. *Journal of Fluency Disorders, 1*, 116–131.
- Weiss, A.** (1993). The pragmatic context of children's disfluency. *Seminars in Speech and Language, 14*(3), 215–225.
- Weiss, A.** (1995). Conversational demands and their effects on fluency and stuttering. *Topics in Language Disorders, 15*(3), 18–31.
- Weiss, A.** (2001). *Preschool language disorders: A resource guide*. San Diego, CA: Singular/Thomson Learning.
- Weiss, A., & Zebrowski, P.** (1991). Patterns of assertiveness and responsiveness in parental interactions with stuttering and fluent children. *Journal of Fluency Disorders, 16*, 483–491.
- Weiss, A., & Zebrowski, P.** (1992). Disfluencies in the conversations of young children who stutter: Some answers about questions. *Journal of Speech and Hearing Research, 35*, 1230–1238.
- Weiss, A., & Zebrowski, P.** (1994). The narrative productions of children who stutter: A preliminary view. *Journal of Fluency Disorders, 19*, 39–63.
- Weiss, A., & Zebrowski, P.** (1997). Effects of conversation participation on young children who stutter. In E. Healey & H. Peters (Eds.), *Proceedings of the 2nd World Congress on Fluency Disorders* (pp. 92–96). Nijmegen, The Netherlands: Nijmegen University Press.
- Weiss, A., Zebrowski, P., & Bernstein Ratner, N.** (2002). *The effects of three discourse parameters on fluency maintenance in the conversations of school-age children who stutter*. Unpublished manuscript.
- Yaruss, J., & Quesal, R.** (2002). Academic and clinical education in fluency disorders: An update. *Journal of Fluency Disorders, 27*, 43–63.

Received September 30, 2002

Accepted June 20, 2003

DOI: 10.1044/0161-1461(2004)005

Contact author: Amy L. Weiss, Department of Speech Pathology and Audiology, 120B SHC, University of Iowa, Iowa City, IA 52242-1012. E-mail: amy-weiss@uiowa.edu