Acquisition of Sign Language by Autistic Children. III: Generalized Descriptive Phrases

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Sign language training has emerged as a viable alternative to speech for those autistic children who remain nonverbal in spite of remediation efforts. Yet the variables responsible for the acquisition of specific signing skills have not been fully investigated. The present study was undertaken to validate experimentally a portion of a general language intervention program developed by the authors. Specifically, we focused on descriptive signing that involved action-object phrases. Four autistic children were successfully taught such phrases following an intervention composed of prompting, fading, stimulus rotation, and differential reinforcement. After being trained on a small number of action-object phrases, the children displayed skill generalization to new situations. The results were discussed with respect to the likely need for added incidental teaching to bring about communicative use of the skills taught.

Language deficit is a cardinal feature of autism (Rutter, 1978), and for that reason considerable research has been undertaken to remediate the problem (Carr, 1985a; Lovaas, 1977; Hemsley et al., 1978). Although remedial procedures have been successful in teaching many children to speak, a significant number remain mute (Mack, Webster, & Gokcen, 1980). Sign training

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has emerged as a viable alternative to speech (Goodman, Wilson, & Bornstein, 1978). Indeed, there is a growing experimental research literature in this area (Kiernan, 1977; Konstantareas, Oxman, & Webster, 1977; Layton & Baker, 1981; Lloyd, 1980). However, a majority of studies are of a nonexperimental nature (Carr, 1979). This fact prompted us to embark on a program of systematic experimentation designed to isolate and identify those variables that contribute to the effectiveness of specific skills acquisition.

Initially, we explored the variables responsible for the acquisition of expressive and receptive sign labels (Carr, Binkoff, Kologinsky, & Eddy, 1978; Carr, & Dores, 1981; Carr, Pridal, & Dores, 1984). Then, we examined the factors responsible for inducing children to use such labels in order to communicate (Carr & Kologinsky, 1983). This research plus related clinical work formed the basis for developing an initial sign training program for autistic children (Carr, 1982a, 1982b). The experimental validation of our program has, to date, focused exclusively on the factors responsible for the performance of single signs. Yet the literature is clear in demonstrating that autistic children are capable of multisign performances as well (Bonvillian & Nelson, 1976; Salvin, Routh, Foster, & Lovejoy, 1977). However, the specific variables necessary for such behavior have not been examined experimentally. In light of this fact, we sought, in the present study, to identify experimentally the factors that facilitate one type of multisign performance.

In addressing the above issue, it is necessary to decide first whether one generic type of multisign performance would be more worth concentrating on than another. The literature on language development in normal children may serve as a guide (Schopler, Reichler, & Lansing, 1980). This literature suggests that one of the earliest and most prevalent multiword utterances involves verb-noun combinations, particularly those that are described in case grammar terminology as action-object phrases (Bloom & Lahey, 1978; Brown, 1973). Indeed, action-object phrases are so common in the language of young children that recent programs designed to treat language delay in otherwise normal children have stressed teaching such phrases after single-word utterances have been mastered (Zelazo, Kearsley, & Ungerer, 1984). In view of the literature just cited, we targeted action-object phrases as the focus of remediation efforts as well as experimental analysis.

It is worth emphasizing that the present study was intended to be not a self-contained teaching program but rather an experimental validation of part of a language intervention package. The skill taught is seen as useful partly because it is developmentally appropriate. In addition, it can be used to extend a child's capacity for conversational exchange. Specifically, the child who may initially be able to answer only those questions requiring a label (i.e., "What is this?") or a request (i.e., "What do you want?") is made capable of answering a question requiring description (i.e., "What am I doing?").