

EFFECTS OF A PUPPET-BASED INTERVIEW TECHNIQUE
ON YOUNG CHILDREN'S BEHAVIORAL SELF-REPORT

by

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ABSTRACT OF THE DISSERTATION

Effects of a Puppet-Based Interview Technique on Young Children's Behavioral Self-Report

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Describes a study conducted (a) to determine whether a novel child interview technique would yield better self-report data than a conventional one, and (b) to compare parents' ratings of child behavior and child self-perception as possible bases for validating children's self-reports.

A behavioral inventory was administered to 26 kindergartners on two occasions a week apart, once with and once without the use of identical hand puppets. Also, a survey was administered to their mothers, which elicited ratings of both child behavior and child self-perception on the inventory criteria. Four hypotheses were framed, based on a review of child self-report and play-based assessment literature, which were tested through analyses of the child interview and parent survey responses.

Children were expected, but not found, to score lower in the puppet interview than the non-puppet interview on measures of socially desirable responding and adaptive behavior. Mothers were expected, but not found, to describe their children's behavior as being generally less adaptive than their children perceived it to be. Children's self-reports of adaptive behavior from the puppet interview were expected, and found, to correlate more strongly than those from the non-puppet interview with mothers' survey reports. Mothers'

reports of child self-perception were expected, and found, to correlate more strongly than those of child behavior with children's interview reports.

Conclusions drawn were (a) that the puppet interview yielded more useful information than the non-puppet interview, although this effect could not be attributed to puppetry per se, and (b) that the interview self-reports had more validity as measures of child self-perception than as measures of child behavior.

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INTRODUCTION

Over the last two decades, mental health professionals have increasingly embraced the need for multifaceted assessment of childhood behavioral and socioemotional functioning (Merrell, 1999). This movement reflects a growing appreciation of human psychosocial complexity: the recognition that different environments foster different kinds and degrees of behavior, that different observers view behavioral phenomena through different lenses, and that different measurement techniques reveal different aspects of the same behavioral phenomena. These sources of information variance imply that an adequately inclusive and balanced approach to child assessment should employ multiple informants, settings, and methods.

Arguably, the same considerations apply to adult assessment, but their importance in child assessment is heightened by certain features that distinguish children, especially younger ones (La Greca, 1990a). Children have less internalized psychological structure than adults. Their experiences and activities are, accordingly, influenced more strongly by contextual factors. Moreover, their ability to negotiate the challenges of increasingly diverse and complex environments (e.g., home, school, playground) as they grow, is itself an important aspect of their adaptive functioning.

Children also need their caretakers to identify and address major problems that arise in their efforts to adapt. It is a commonplace that children do not typically refer themselves for clinical services. The adults who interact with a child must communicate with service providers about a possible need for intervention, and their impressions weigh heavily in the child's evaluation. The views of different adults (e.g., parents and teachers) interacting with the same

child frequently diverge, however, in ways that reflect not only different activity environments but also different role and relationship perspectives. The similarities and differences among these perspectives may provide useful information about both the child and the caretakers (Achenbach, McConaughy, & Howell, 1987).

Of course, children can often provide information about themselves through a variety of means, ranging from those that are highly inferential and controversial (e.g., projective measures) to those that rely on more or less direct, factual inquiries (e.g., interviews and rating scales). When children do describe themselves, their views frequently diverge substantially from those of adults (Achenbach et al., 1987). Many clinicians have accordingly relied less upon children than their caretakers to obtain factual information about behavioral and socioemotional dispositions, believing children's self-descriptions to be comparatively incomplete, biased, and unreliable (Hughes & Baker, 1990; Stone & Lemanek, 1990). Children may, for example, lack the memory or comparison skills needed to make accurate normative judgements about such issues as the frequency, intensity, or pervasiveness of particular behaviors. Their impressions of events or circumstances may also be strongly influenced by recency effects, perceptual salience, a disposition to think in global terms, or strong emotional needs. Moreover, their dependence upon, or conflicts with, adults may dispose them to acquiescent, oppositional, or socially desirable behavior when responding to questions about their experiences and dispositions.

The realization that children's developmental levels can limit their abilities to describe their behavioral and socioemotional dispositions has made

a valid contribution to assessment theory and practice, but it may well have prompted an overreliance upon others' views of children in garnering information. Discrepancies between children's self-reports and other's reports about them apparently sometimes reflect children's greater access to the subject matter. This is especially true for subjective states or experiences (e.g., feelings and thoughts) that figure prominently in *overcontrolled* or *internalizing* disturbances, such as anxiety and depression (Kazdin, 1990), but it may also apply to certain covert activities occurring in *undercontrolled* or *externalizing* disturbances, such as conduct disorder (Kazdin, as cited in Merrell, 1999, p. 231). These behaviors may be important to identify not only for diagnostic purposes but also as possible targets of therapeutic intervention, even when children's reports of them diverge from others' impressions (La Greca, 1990a).

Clinicians and researchers have consequently nurtured an interest in refining methods to elicit self-descriptive information from children. Their efforts are based on the premise that a child's communicative competence is partly a function of the assessment process, and that this process must employ a working knowledge of children's developmental capabilities and limitations (Hughes & Baker, 1990; La Greca, 1990b). Put another way, they embrace the notion that the way in which a question is (literally or figuratively) "asked" of a child may substantially affect the answer obtained.

The clinical interview is perhaps the most traditional and widely used means of asking children questions about themselves, and it is indeed flexible. It may vary along several dimensions, including the amount of structure imposed, the type of information sought, and the mode of participant interaction (Hughes & Baker, 1990; Sattler, 1998). For example, an interview

may be highly structured, prescribing questions and even possible responses for the interviewer and child; or it may allow the interviewer to follow the child's leads. Also, it may garner information about events or circumstances in the child's life, or about the child's behaviors, thoughts, feelings, and abilities, all of which may be relevant to diagnostic decisions or treatment planning. Finally, it may entail formal conversation between the interviewer and the child, or allow the child to engage in a creative activity (e.g., drawing or play) while the interviewer observes, converses, or even participates.

These degrees of freedom permit substantial adaptation of the interview to various assessment purposes and circumstances. Based on their review of contemporary developmental and assessment literature, Hughes and Baker (1990, pp. 29-63) offered several recommendations for "developmentally sensitive interviewing" of young children. In particular, they advocated a moderate degree of structure, noting that young children have difficulty responding coherently to open-ended questions, but are also unlikely to elaborate characteristically terse responses to closed-ended questions. They also suggested the use of concrete stimulus and response materials, such as pictures or toys, to help children identify and relate to the subject matter of questions and possible answers.

These recommendations have plausible rationales, but questions remain about the actual utility of particular interview strategies. Of particular concern to many clinicians and researchers are the reliability and validity of self-report data, particularly when these data will be used in diagnostic decision making and treatment planning (Flanery, 1990; Merrell, 1999). These psychometric qualities are most readily ascertained and promoted via highly structured

assessment methods (e.g., structured diagnostic interviews and behavioral rating scales). How effectively might these kinds of assessments be conducted with young children? Are specialized stimulus materials or communication techniques helpful?

A small but growing number of studies have been addressing these questions. Some investigators have developed specialized instruments, and provided information to document their specific uses or permit comparisons of their properties with those of traditional instruments. For example, Harter and Pike (1984) described a self-concept measure devised for children aged 4 to 7 years, for which stimulus materials included drawings of children engaging in age-appropriate activities. The authors provided several types of evidence to validate children's self-report scores. Less commonly, investigators have tested and compared the psychometric properties of different instruments or procedures within a single experiment. For example, Marsh, Craven, and Debus (1991) examined the effects of individual versus group administration on the reliability and validity of first- and second-graders' responses to a self-description questionnaire.

This dissertation describes a study of the latter type. It was conducted to evaluate a novel structured interview technique, in which puppetry is used to elicit self-descriptive data from young children (Eder, 1990; Measelle, Ablow, Cowan, & Cowan, 1998). Although this technique has been thought to enhance the quality of information obtained, its performance has not previously been tested by direct comparison with a more conventional approach to structured interviewing.

In what follows, I shall review some historical, theoretical, and empirical aspects of two traditions that converge in the use of puppetry to elicit children's self-descriptions, namely, self-report measurement and play-based assessment. I shall then provide some rationales for the claim that puppetry enhances structured self-report assessment with young children, and the means I employed to test this claim.

Self-Report Measurement

Child self-report measures have evolved principally on the model of adult self-report personality inventories. The earliest adult inventory, the *Woodworth Personal Data Sheet*, was developed as a standardized and efficient means to screen large numbers of individuals for psychiatric symptoms. Several more contemporary measures, such as the *Minnesota Multiphasic Personality Inventory (MMPI)*, have likewise served as clinical screening or diagnostic instruments, although they and others, such as the *NEO Personality Inventory (NEO-PI)*, have also had applications in personality research and in industrial and organizational psychology (Anastasi & Urbina, 1997).

Clinical disturbance and self-concept have been major themes in child self-report measures. Some clinical instruments, such as the *Behavioral Assessment System for Children (BASC; Reynolds & Kamphaus, 1992)*, measure adjustment over a broad range of clinical and interpersonal domains. Others, such as the *Children's Depression Inventory (CDI; Kovacs, 1991)*, focus on symptoms associated with specific clinical disorders. Self-concept inventories, such as the *Pictorial Scale of Perceived Competence and Social Acceptance (PSPCSA; Harter & Pike, 1984)* or the *Self-Description Questionnaire I (SDQ-I;*

Marsh, 1988) measure self-perceived attributes in several domains, such as appearance, physical or academic ability, or social relationships.

Notwithstanding various purposes, self-report instruments share a common basis of construction (Anastasi & Urbina, 1997). Each comprises a set of *stimulus items*, to which the reporter's *responses* are numerically scored according to a set of pre-established, non-individualized rules. Items may be included because their descriptive content ostensibly reflects the characteristic to be measured, or because responses correlate with other indicators of the characteristic. Item scores are typically aggregated on the basis of more or less homogeneous item descriptive contents or response patterns, to form *scales* that reflect distinct aspects of a multifaceted phenomenon.

To serve as useful instruments, self-report inventories must satisfy certain psychometric requirements (Anastasi & Urbina, 1997; Flanery, 1990). One of these is *reliability*, which concerns consistency in scores obtained from repeated measurements when the measured characteristic remains constant. *Test-retest* reliability comprises consistency across separate instrument administrations; *alternate form* reliability comprises consistency across separate instrument versions; and *internal consistency* reliability comprises consistency across separate but comparable instrument parts (e.g., among the items within a scale).

Another requirement is *validity*, which concerns relationships between instrument scores and other measures of phenomena. *Convergent* validity comprises a high correspondence between instrument scores and other indices of the characteristic being measured, whereas *discriminant* validity comprises a

low correspondence between instrument scores and indices of one or more characteristics *not* being measured.

Efforts to extend self-report measurement to young children must address certain challenges (Merrell, 1999; Stone & Lemanek, 1990). One of these is the identification of age-appropriate content and structure for the instruments. The types of problems that children experience, and the ways in which they perceive and describe themselves, vary with development. Thus, the selection of items, formation of scales, and establishment of scoring norms must often be accomplished separately for specific age and sex groups.

A second challenge is the adaptation of administration procedures and materials to children's age-specific abilities. Young children's limited reading skills may require that adults read instructions and stimulus items to them, and even mark responses for them. Also, their limited sentence processing capabilities may require that the syntax and wording of items be simplified, and their limited vocabulary may warrant the use of props for stimulus items.

A third challenge is the management of potentially strong *response bias*, defined as "a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content" (Paulhus, 1991, p. 17). Young children are thought especially susceptible to *socially desirable* responding (presenting an unrealistically favorable image of the self), *acquiescent* responding (answering affirmatively), and responding by selecting the last answer choice presented. Efforts to reduce response biases in young children have included the use of complementary self-descriptions as response options, the characterization of all response options as socially acceptable, and

the counterbalancing of positive and negative evaluative tone in response option ordering.

Recent efforts to study self-concept in young children help to illustrate the co-evolution of theory, instrumentation, and empirical research in self-report measurement. Departing from earlier conceptualizations, which treated self-concept as a unidimensional construct, Harter and Pike (1984) developed an instrument (the PSPCSA) intended to measure young children's self-perceptions within four specific domains, namely, cognitive competence, physical competence, peer acceptance, and maternal acceptance. It has one set of stimulus items for preschoolers and kindergartners and another set for first and second graders. The items characterize children's abilities and dispositions in terms of concrete behaviors and activities (e.g., "good at puzzles") rather than abstract traits (e.g., "smart"). Each comprises a pair of drawings, accompanied by verbal descriptions, in which a child of the respondent's sex exemplifies opposing attributes (e.g., "good" versus "not good" at doing puzzles). To score each item on a 4-point scale, the interviewer asks the respondent first to identify with one or the other pictured child, and then to refine this self-appraisal (e.g., "pretty good" versus "really good" at doing puzzles).

Administering this instrument to a number of children, the authors obtained acceptable internal consistency reliabilities for individual scales. They also obtained some evidence of validity; for example, by finding that children could offer plausible rationales for their self-appraisals. After performing an exploratory factor analysis that yielded one factor for the two competence scales and another, moderately correlated one, for the two social acceptance scales,

the authors concluded that children aged 4 to 7 years possessed only two distinct dimensions of self-concept among the four domains assessed.

Marsh et al. (1991), however, obtained evidence of a more elaborate self-concept structure in young children using the SDQ-I, the preadolescent version of a generalized self-concept inventory. This instrument has a more conventional item format than the PSPCSA, employing only descriptive sentences for stimuli and a five-point true-false scale for responses. The investigators administered the instrument to kindergartners and to first and second graders through individualized interviews, in which they helped children to resolve comprehension problems. For comparison purposes, they subsequently administered the instrument to the first and second graders in a group setting. Confirmatory factor analyses of eight *a priori* scales supported the existence of eight distinct self-perception domains across the three age groups. These were: physical ability; physical appearance; peer relationships; parent relationships; reading, mathematics, and general school competencies; and generalized self-concept. Goodness-of-fit statistics for the factor models showed that, among first graders, the individualized administration yielded a substantially clearer factor structure than did the group administration.

Of further interest in research conducted with the aforementioned instruments is a distinction concerning validity assessment. Harter and Pike (1984) obtained moderate (.37 and .30) and weak (.06) correlations, respectively, between self-reports on the PSPCA and teachers' ratings of children's cognitive competence, physical competence, and peer acceptance. They suggested that children's self-perceptions could diverge from others' perceptions of them, for reasons such as confusion between desired and actual

competencies. Along similar lines, Marsh and Craven (1991) argued that other informants' *inferences* of children's self-concepts are more relevant than behavioral ratings to validating child self-concept measures per se. In a study of third- to sixth- grade school children, they obtained moderate (.36) to large (.54) median correlations between children's self-reported self-concepts and parents' and teachers' inferences of children's self-concepts, as measured by scales of the SDQ-I.

A third effort to study self-concept in young children, undertaken by Eder (1990), focused upon appraisals of personality characteristics rather than competence or esteem. In an earlier study, Eder (1989) had demonstrated that children aged as young as 3½ years have sufficient memory abilities to report their own and others' general tendencies towards distinct actions and internal states. In this study, she sought to determine whether children's self-reports of general tendencies were organized into coherent patterns evincing individual differences. Eder devised an inventory in which the items comprised pairs of self-descriptive statements, drawn from children's previous self-reports, that reflected opposite poles of ten established dimensions of adult personality variation. She then used a pair of identical puppets to administer the items. Appearing within a theater, the puppets would describe themselves respectively in terms of the opposing statements. After each statement pair, an interview assistant would ask the child for a self-description in kind.

Interviewing children aged 3½, 5½, and 7½ years with this inventory, Eder obtained acceptable internal consistency reliabilities for most of the scales. Exploratory factor analyses of the scales yielded a different three-factor structure for each age group. Patterns of factor composition and loading were

coherent and logical (indeed, two of the factors for 7½ year-olds, Emotional Stability and Extraversion, resembled familiar adult personality constructs), and children exhibited distinct individual differences on the factor scores. Eder's findings afford impressive evidence that organized self-concept exists, and is measurable through self-report assessment, even in very young children. A shortcoming of her effort, however, is the lack of external validation for the children's self-reports.

Recently, Measelle, Ablow, Cowan, and Cowan (1998) developed a clinically oriented, structured interview for children, aged 4½ to 7½ years, that employs a variation on Eder's novel administration technique. In their method, the interviewer sits face-to-face with the child, presents opposing self-descriptions through a pair of identical hand puppets named *Iggy* and *Ziggy*, and prompts the child's reply in kind. The child may endorse either puppet's statement as a self-description through verbalizations or gestures. The interview is videotaped and the child's responses are later coded on a 7-point scale.

An early version of this instrument included six scales intended to assess children's self-perceptions in domains relevant to school adjustment. These scales included item content drawn from the self-perception and clinical literature. They comprised: academic competence; achievement motivation; social competence; peer acceptance; depression and anxiety; and aggression and hostility. Administering the first four scales to preschool children, and all six to kindergarten and first-grade children, the investigators obtained acceptable internal consistency reliabilities, and support from exploratory factor analyses for the distinctness of the scales. Administering questionnaires with

comparable content to adults, they also found moderately high (generally .30s and .40s) scale correlations between children's self-perceptions and teachers' and mothers' child-behavior ratings.

A subsequent version included nine scales intended to assess symptoms in the internalizing, externalizing, and attentional child-clinical domains. Administering it to both community and clinic-referred children, Ablow et al. (1999) found that it possessed moderately high test-retest reliability (about .60) among children over a 7- to 10-day period. They also found that scores on several of the scales differentiated moderately well between the community and clinic-referred children.

Play-Based Assessment

Child-oriented clinicians have long believed that play behavior has important uses in assessment and treatment (Schaefer & O'Connor, 1983). This is especially true for the type of play characterized variously by such terms as *pretend*, *fantasy*, *imaginative*, or *symbolic*. Young children tend to engage enthusiastically in pretend play, and to express emotionally salient themes within it (Fein, 1987; Piaget, 1952). Clinicians have accordingly regarded it as an age-appropriate medium of personal expression, and have sought to facilitate, observe, and even join it as a means of establishing rapport and fostering change.

A view maintained by many psychoanalytic clinicians has been that the symbols and activities of pretend play reveal a child's intrapsychic experiences and processes. Reviewing some trends in the early twentieth century, Conn (1989) observed that a number of practitioners perceived deeply disguised manifestations of drives, conflicts, and defenses in its themes; for example, that

a boy who pretended to shoot a gun "was told that he had expressed the wish to kill his father" (p. 4). Taking issue with this tradition, he pioneered a style of interview in which the child is encouraged to play freely with doll figures, explaining their actions and dialogue as the clinician inquires non-directively about them. Conn presented transcripts from sessions in which children evidently projected their life circumstances and emotional concerns (e.g., sibling rivalry) more or less overtly onto the dolls, and with modest prompting acknowledged or even volunteered interpretations of correspondence between play and reality. These interpretations were considered to yield therapeutic benefit by helping the children to reflect upon their experiences, thoughts, and feelings.

Irwin (1993) has described a moderately structured puppet interview procedure and rating scale designed for psychoanalytically oriented assessment. The child is introduced to a set of human and animal puppets evincing a broad range of physical, psychological, and social characteristics, and is prompted non-directively to stage a puppet show with one or more of them. After observing the puppet selection process and the show, the clinician interviews the puppets and then the child, to elicit more information about character identities and action meanings. In making an evaluation, the clinician considers both the content (e.g., themes) and structure (e.g., narrative cohesion) of the puppet play, seeking to identify the child's needs, feelings, perceptions, and conflicts, as well as defensive and coping processes.

Knell (1993) has described a more highly structured interview procedure, in which puppets are used to administer a sentence completion task to preschoolers. The interviewer initially uses two hand puppets to model the

interview process. The first puppet completes a self-descriptive sentence, and turns to the second puppet as a prompt; the second puppet then completes a sentence with the same stem, and turns to the child as a prompt. The child may then reply either directly, or through his or her own hand puppet. After the child gains familiarity with the task, the interviewer withdraws the second puppet. Consistent with her cognitive-behavioral orientation, Knell tends to regard the sentence completion content as more or less directly informative about the child's thoughts and feelings, although she also notes that resistive or disorganized responses to questions that touch on sensitive issues may have diagnostic significance. She also asserts that the child's option to answer through a puppet may facilitate the child's candor by providing a means of indirect self-disclosure.

Although these and other clinicians have attributed importance to play-based psychosocial assessment, there has evidently been a dearth of controlled empirical research regarding the validity of particular techniques. Two notable exceptions are studies that examined relationships between the characteristics of children's doll or puppet play, as measured by standardized scoring procedures, and informants' ratings of children's behavior.

Warren, Oppenheim, and Emde (1996) administered a story-stem completion task to three-, four-, and five-year-olds. The interviewer used dolls and miniature props to dramatize a child-protagonist's entry into a potentially challenging social situation (e.g., the child spills juice while the family is drinking together), and then asked the interviewee to complete the action (there were twelve distinct scenarios). The investigators found that children's expressions of distress during the storytelling, and their incorporation of

aggressive and destructive themes into the stories, were positively correlated with parents' (for 4- and 5-year-olds) and teachers' (for 5-year-olds) ratings of externalizing problems on standardized behavioral rating scales (the *Child Behavior Checklist [CBCL]* and the *Teacher Report Form [TRF]*; Achenbach, 1995).

Mize and Ladd (1988) administered two versions of a story-stem completion task (in counterbalanced order, two to three weeks apart) to a group of four- and five-year-old children. In the *verbal* version, the interviewer presented a line drawing that illustrated a challenging peer-interaction situation for the interviewee (e.g., a toy use conflict), and then prompted the interviewee to describe her or his response (there were six distinct scenarios). In the *enactive* version, the interviewer presented the same scenarios using dolls and puppets, and prompted the interviewee to demonstrate her or his response. The investigators found that themes of friendliness versus aggressiveness in the children's story completions predicted observers' and teachers' ratings of prosocial and aggressive behavior in the daycare environment, and that ratings of these themes from the enactive task version were more powerfully predictive than those from the verbal task version.

Puppetry and Self-Report

The preceding discussions reveal some points of convergence between two child assessment traditions normally regarded as distinct. On the one hand, investigators seeking to adapt structured self-report inventories to the needs and capacities of younger children have incorporated a form of pretend play (i.e., puppetry) into their interview procedures. On the other hand, those seeking to distill objective information about children's psychosocial functioning

from childhood pretend-play behavior have incorporated structure into the administration and scoring of play-based assessment tasks.

There are, indeed, distinctive reasons why the combination of self-report measurement and puppetry may produce an especially useful assessment tool. These concern the significance of play as a familiar and rewarding form of activity, which may help the child engage in a task that might otherwise seem arduous, tedious, or discomfoting.

Vygotsky (1967) asserted that play actually facilitates development by motivating the child to meet challenges or accept constraints in the pursuit of enjoyment. For example, a child goes to bed more willingly when doing so is made palatable as a game. Studies of affect in play suggest that it does foster both interest and enjoyment (Phillips, 1994; Singer, 1979). Because the presentation of stimulus materials through puppets injects an element of playfulness into the interview, it may help to capture and sustain a child's attention.

Singer (1979) asserted that pretend play helps to reduce a child's anxiety when threatening real-world stimuli are cast into a miniature, manipulable form, so that the child may gain familiarity with them. For example, a child may become less fearful of large, noisy, real fire trucks after playing with small replicas. Similarly, a child may feel more comfortable communicating with an unfamiliar adult when the conversation is channeled through small, friendly-looking hand-puppets.

Modern theories of pretend play also suggest that it may help a child to communicate about potentially threatening subject matters, because its hypothetical qualities afford a measure of psychological distance from them. Of

special relevance in this regard is Bateson's (1955) notion that pretense establishes a psychological *frame*, or context, in which the literal meaning of one's messages is ostensibly but sometimes ambiguously denied. For example, a literary work may present itself as an article of pure fiction, while implicitly commenting upon an actual social situation. Similarly, a child may "merely pretend" to express thoughts and feelings that are in fact genuine, to or through a fictional character depicted by a doll or puppet.

In addition to these general ideas there are specific reasons why the techniques employed by Eder (1990) and Measelle et al. (1998) might facilitate children's self-disclosure. Puppetry affords a vivid medium in which personal attributes may be concretely exemplified. A puppet's movements and voice inflections may accordingly help to convey the meaning of its self-descriptive comments. Also, a puppet's forthright ownership of both desirable and undesirable traits may naturalize and legitimize a wide range of human identities.

The Present Study

The primary purpose of the study described here was to determine whether using a pair of identical puppets to administer a young children's self-report inventory enhances the quality of information obtained, relative to a similar but more conventional interview administration technique. The arguments of the preceding section imply that it should do so, and indeed the investigators who have employed this technique have obtained noteworthy findings. Controlled experimental study, however, is needed to support a more definite conclusion.

A secondary purpose of the study was to compare two distinct criterion measures as possible bases for validating children's self-reports, namely, adult informants' reports of children's behavior and their reports of children's self-perception. Research concerning behavioral and emotional problems has emphasized the former, whereas that concerning self-concept has emphasized the latter. Performance differences between these two criteria may be generally relevant to interpreting children's self-reports. To my knowledge, however, they have not previously been ascertained through direct comparison.

To conduct the study, a self-report inventory was administered twice to kindergartners, using two techniques that differed specifically in whether hand puppets presented the items; and a survey was administered to their mothers, which elicited ratings of both child behavior and child self-perception.

Kindergartners were chosen for the interviews, as members of an age group generally underserved by assessment instruments (Merrell, 1999) who can nonetheless provide temporally stable self-report data (Ablow et al., 1999). Mothers were chosen for the survey, as relatively knowledgeable informants on their children's behaviors (Measelle et al., 1998) and self-perceptions (Marsh & Craven, 1991).

Four hypotheses were formulated. Two of these concerned expected effects of interview technique on child response behavior. One prediction was that using puppets to administer the self-report inventory would facilitate children's forthright self-disclosure. This effect would likely increase a child's willingness to acknowledge common social imperfections, and thus decrease his or her disposition towards socially desirable responding (*SDR*; Paulhus, 1991). Accordingly, scores on a measure of social desirability administered with the

inventory, as well as scores on measures of adaptive functioning within the inventory, were expected to be lower for the puppet interview than the non-puppet interview.

A second prediction was that the puppetry technique would make the assessment task more appealing and intuitive. This effect would likely increase a child's attention, understanding, and cooperation, and thereby increase the general accuracy of his or her responses. It would presumably be stronger among children less inclined to maintain an attentional focus on tasks and those more inclined to exhibit shyness in unfamiliar situations. Accordingly, children's self-descriptions from the puppet interview were expected to correlate, more strongly than those from the non-puppet interview, with mothers' reports of child behavior and child self-perception. These differences in correlation strength were expected to be greater among those children rated comparatively low in attentional focusing, and comparatively high in shyness, by their mothers on temperament scales administered through the survey.

The two remaining hypotheses concerned expected differences between the two types of parent report, based on the premise that parents distinguish between children's behavior and children's self-perception. One prediction was that mothers would find young children's self-perception to be positively biased, in accordance with the conjecture that young children are apt to confuse desired and actual competencies (Harter & Pike, 1984). Mothers were thus expected to describe their children's functioning as less adaptive on their own views than on their children's views.

Another (not incompatible) prediction was that mothers would provide individualized and differentiated reports of their children's behavior and

self-perception, and that the latter reports would prove more comparable than the former ones to children's self-descriptions. Accordingly, mothers' reports of child self-perception were expected to correlate, more strongly than those of child behavior, with child interview reports.

METHOD

Participants

Participants were young children and their mothers (or female guardians). The children were all attending kindergarten classes in the public elementary school of a central New Jersey town, in which the residents have predominantly above-average educational, occupational, and economic status. Among the school's three kindergarten classes, 52 children were available to participate, and 26 received parental permission. All of these children were included. They comprised 13 girls and 13 boys, and had ages ranging from 5 years 7 months to 6 years 10 months, with a mean of 6 years 2 months.

Procedure

The study was conducted during April and May of one school year. Permission was obtained from the school's principal and kindergarten teachers, and from the Rutgers Institutional Review Board. Packets containing consent forms and parent survey materials were distributed to parents via the children's school packs. Parents who wished to participate, and to allow their children to do so, returned signed consent forms. Children were recruited through brief explanations, provided by the teachers, of the study's purpose (to help grownups learn about different ways of talking with children) and procedures (that grownups would ask children questions about themselves, talking through hand puppets part of the time).

Parent Survey

Each participating parent completed and returned a rating form (Appendix 1) on her child. It was divided into two sections, the first of which comprised the Attentional Focusing (ATF) and Shyness (SHY) scales from the

Children's Behavior Questionnaire (CBQ; Rothbart, Ahadi, Hershey, & Fisher, 2001). The CBQ is an instrument designed to assess multiple dimensions of temperament in children aged 3 to 7 years through caregiver behavioral ratings. Its scales have demonstrated adequate internal consistency, and convergent validity in the form of parental cross-informant agreement and prediction of relevant parent-reported social behavior patterns.

Rothbart et al. (2001) define temperament overall as "constitutionally based, individual differences in reactivity and self-regulation." Their construct definition for the ATF scale is "capacity to maintain attentional focus upon task-related channels," whereas that for the SHY scale is "speed of approach (slow or inhibited vs. rapid) and discomfort vs. comfort in social situations." Each scale version used in the survey comprised 13 items (5 of the ATF items used were added recently to the instrument scoring manual, but not to the printed questionnaire; for a table of all parent survey items, see Appendix 2). The question and response format, seven-point Likert scale, and scale-point labels of the original questionnaire were maintained (along with a response option of *NA* for *Not Applicable*), as was much of the instructional wording. Items from the two scales were interspersed evenly.

The second section of the parent survey form comprised items based on the Child Self-Perception scales, as originally published, of the *Berkeley Puppet Interview* (BPI; Measelle et al., 1998). Item content was substantially preserved, although wording was adapted to the third-person, single-statement syntax of the temperament rating scales (one item, "Is smart for his/her age," was drawn verbatim from the *Child Adaptive Behavior Inventory*, an instrument with which the BPI was originally developed; Cowan, Cowan, Heming, & Miller, 1995). The

question and response format resembled that of the temperament items. A four-point Likert scale with different scale-point labels (and a response option of *DK* for *Don't Know*) was used, however, and a double-column arrangement was introduced for parents to record side-by-side ratings of their children's *behavior* and *self-perception* (herein respectively called report versions *B* and *C*).

Five of the six originally published scales, comprising a total of 34 items, were included (the Achievement Motivation scale was omitted to moderate length): these were Academic Competence (6 items); Aggression and Hostility (5 items); Depression and Anxiety (10 items); Peer Acceptance (8 items); and Social Competence (5 items). Items from the five scales were interspersed evenly, and wording was chosen to balance positively and negatively evaluative orientation.

Child Interview

Each participating child completed two versions of an interview (Appendices 3 and 4) administered approximately one week apart. The interview sessions were conducted in open but quiet school areas near the kindergarten classrooms, with the interviewer and child seated in chairs, facing one another across a small table. They were videotaped for subsequent response coding.

Each interview version began with a brief script introducing the procedure and obtaining the child's consent, and ended with the offer of a decorative sticker. The questions for both versions comprised 34 items drawn from the BPI Child Self-Perception scales (discussed above), and 20 items drawn from the *Young Children's Social Desirability* scale (YCSD; Ford, 1970). The latter instrument is a forced-choice questionnaire that measures a child's disposition to claim tendencies that are "culturally approved, but infrequent in

occurrence" and to deny tendencies that are "culturally disapproved, but frequent in occurrence" (p. 196). It has demonstrated acceptable internal consistencies and moderate test-retest reliabilities on children as young as 4 years of age, and it yields scores associated empirically with a "general motivation to comply with social demands" (p.204).

The BPI-based items in the child interview corresponded one-to-one in content with those used in the parent survey. The YCSD-based items comprised the instrument's 2 practice questions, and an abbreviated Social Desirability (DES) scale formed from 18 of its 26 social desirability questions (those entailing lengthy sentences or double-negatives were omitted; for a table of all child interview items, see Appendix 5). Item content was substantially preserved, although wording was adapted to accommodate differences in linguistic format between the two versions, as described below. Items were ordered so that each (non-practice) YCSD-based question was followed by two BPI-based questions.

In the *puppet (P)* version of the interview, the interviewer donned simple, identical hand puppets (golden-brown puppy dogs named *Flippy* and *Floppy*), and through them presented each item as a pair of mutually opposed self-descriptions, followed by a prompt for the child's own self-description. (For example: [*Floppy*] *I worry a lot.*/[*Flippy*] *I don't worry a lot.*/[*Floppy*] *How about you?*) The descriptive statements were ordered to balance, within small groups of items, between positive and negative evaluative tone of the first pair-member presented. Script markings directed the interviewer to alternate between the two puppets in beginning the items.

In the *non-puppet (N)* version, the interviewer directly presented each item as a pair of mutually opposed, indefinitely applied child descriptions, followed by a prompt for the child's own self-description. (For example: *Some kids worry a lot./Some kids don't worry a lot./How about you?*) The descriptive statements were ordered identically to those in the puppet version.

Each child completed both interview versions with the same interviewer (except for one who was rescheduled due to an absence). Version order was counterbalanced by randomly assigning one puppet and one non-puppet version to each pair of consecutive children seen by an interviewer for their first sessions.

The interviews were administered by three female research assistants who were pursuing degrees in education or psychology, and who had previous experience interacting on a professional basis with young children. They were kept uninformed about the research hypotheses for the study duration.

The interviewers were encouraged to conduct the interviews with an accepting demeanor, and to avoid gestures or vocal inflections that might bias the attractiveness of descriptive statements. They were also trained to seek clarification of ambiguous responses, as follows. When the child replied with a simple *yes* or *no*, the interviewer would ask if each descriptive statement was the one endorsed. (For example: *Do you mean, yes, you worry a lot? Or, yes, you don't worry a lot?*) When the child replied using a non-requested, moderating quantifier (e.g., *sometimes, a little*; this situation arose with BPI-based items) the interviewer would ask if each descriptive statement was the more applicable one. (For example: *Do you worry more of the time? Or, do you not worry more of the time?*) When the child replied omitting a necessary

temporal quantifier (*sometimes, always, or never*; this situation arose with YCSD-based items), the interviewer would repeat the item with vocal emphasis on each descriptive statement's respective quantifier. (For example: *Do you **sometimes** argue with your mother? Or, do you **never** argue with your mother?*)

Data Analysis

Child interview videotapes were coded by the principal investigator without reference to other study data. Item responses were designated by a 1 or 2, respectively, according to whether the child had endorsed the first or second descriptive statement. Responses were considered unambiguous only if the descriptive content was clearly acknowledged in the child's speech (none of the children answered questions by pointing to puppets). For BPI-based items, this required an endorsement of one statement as either the complete or the more applicable description. For YCSD-based items, it required verbalization of the statement's temporal quantifier. When replies were inaudible or ambiguous, they were coded as missing.

Because hypotheses predicted differences between interview versions in child response behavior, avoidance of potential statistical biases from differences between interview versions in the frequency or circumstances of missing data was especially important. Accordingly, responses coded as missing for either version were treated in the analysis as missing for both versions.

Parent survey responses were initially coded as the scale point numbers that parents had circled or, when NA or DK had been circled, as missing. BPI-based items were then recoded to span the same range as child responses, by

mapping the numbers 1, 2, 3, and 4, respectively, into 1.00, 1.33, 1.67, and 2.00.

Scales were obtained from the coded data by averaging item responses (after appropriate scoring reversals; see Appendices 2 and 5). Histograms and scatterplots for the individual BPI-based scales showed that these measures were generally high in skewness and low in variability. Accordingly, a Total Adaptive Functioning (TAF) scale was formed for each parent and child report version, by averaging all 34 BPI-based items (after scoring modifications that uniformly denoted more adaptive reported behavior with higher numbers). It had better distributional properties, and was therefore adopted for the relevant hypothesis tests.

Reliabilities of the interview-based TAF and DES scores were assessed with the aid of a fourth research assistant, who coded a subsample ($n = 14$) of the interview videotapes independently and without knowledge of the research hypotheses. The videotapes were selected randomly, subject to the requirement of even distribution among the interviewers, interview versions, and participant sexes. Intraclass correlation coefficients were computed using a formula given by Shrout and Fleiss (1979) for the case in which rater effects are considered random. The values obtained for TAF, $r_1(12) = .83$, $p < .0001$, and for DES, $r_1(12) = .98$, $p < .0001$, indicate that scores on both scales were highly reliable.

Hypothesized differences between the two interview versions in child response disposition were tested by comparing the respective means for both DES and TAF. Parent ratings of child self-perception and child behavior were likewise tested for a mean difference in TAF.

Hypothesized differences between the two child interview versions in their association with parent reports, and between the two parent report versions in their association with child interviews, were tested by comparing the strengths of cross-informant correlations on TAF. Hypothesized moderations of parent-child report correlation by temperament variables (ATF and SHY) were tested through hierarchical regression analyses employing those variables as interaction terms.

Unless otherwise noted, statistical tests were considered significant at an alpha level of .05, and were two-tailed (except for meta-analytic comparisons, which are necessarily one-tailed).

RESULTS

Child Report Mean Scores

Two primary hypotheses tested in this study concerned expected effects of interview administration technique on child response behavior. One prediction was that children would acknowledge their shortcomings more readily to adults when questions were posed to them through hand puppets than when they were posed by a more conventional method. Accordingly, children were expected to report less socially desirable and less adaptive behavior in the puppet (P) interview than in the non-puppet (N) interview.

Table 1 presents non-parametric descriptive statistics for one set of child report measures relevant to this hypothesis, namely, the individual BPI scales used to assess various aspects of adaptive functioning. As noted in the Method chapter, score distributions for these measures were high in skewness and low in variability. More specifically, they had modal values at or near the levels denoting maximally adaptive functioning. Item responses endorsing the less adaptive alternatives were, for some scales, frankly rare. For example, only 4 of 26 children in the non-puppet interview, and 2 of 26 children in the puppet interview, endorsed a non-adaptive response for any of the six Academic Competence items. This fact is reflected in the median of 2.00, and the interquartile range of 0.00, for both versions of this measure.

Score distributions were, by contrast, approximately normal for the Total Adaptive Functioning (TAF) scale, formed by pooling all 34 BPI-based items, and for the Social Desirability (DES) scale, constructed from the 18 YCSD-based items. Table 2 presents means for these measures, and for score differences (P – N) between the puppet and non-puppet interview versions. Small,

non-significant effects,¹ opposite in direction to expectation, were obtained for report-version differences on DES, $M/SD = 0.17$, $t(25) = 0.86$, $p > .05$, and on TAF, $M/SD = 0.26$, $t(25) = 1.30$, $p > .05$. These results clearly did not support the hypothesis.²

An elaboration of the hypothesis was also evaluated, through comparisons that tested whether different children responded in different ways to the interview procedures. Report-version difference scores were compared for children receiving the puppet interview during the first versus the second experimental session, and for girls versus boys. Although sequence was counterbalanced in the total sample, more girls than boys received the puppet interview in their first session. To eliminate potential confound between the effects of sequence and sex, data were analyzed by the method of unweighted means (Rosenthal, 1991, pp. 355-360).

Table 3 presents group means by interview administration sequence and sex on the DES difference scores, and Table 4 presents two-way analysis of variance (ANOVA) statistics for these data. A significant main effect occurred for sequence, $\eta^2 = .44$, $F = 5.26$, $p < .05$, but the presence of a significant interaction effect, $\eta^2 = .50$, $F = 7.19$, $p < .05$, indicated that it was moderated by sex. Group comparisons showed that difference scores were significantly

¹ For a discussion of effect sizes, see Rosenthal (1991), pp. 446-451. I am treating M/SD for difference scores as roughly analogous to Cohen's d . Values of .20, .50, and .80 for Cohen's d , and of .10, .30, and .50 for correlation coefficients, are respectively considered *small*, *medium*, and *large* in magnitude.

² A possible explanation for null findings is that the measures employed are unreliable. The correlation between the puppet and non-puppet versions of each interview measure, however, might be construed broadly as an index of alternate form, delayed test-retest reliability. For DES, this correlation was $r = .78$, $p < .0001$; and for TAF, it was $r = .72$, $p < .0001$.

lower among children receiving the puppet interview first than among those receiving it second, but only for girls, $r = -.60$, $t(22) = -3.52$, $p < .01$, as distinct from boys, $r = .06$, $t(22) = 0.27$, $p > .05$.

Table 5 presents group means by interview administration sequence and sex on the TAF difference scores, and Table 6 presents two-way ANOVA statistics for these data. A significant main effect occurred for sex, $\eta^2 = .43$, $F = 4.96$, $p < .05$, indicating that difference scores were generally higher among boys than girls. Difference scores for boys were also significantly greater than zero, $M/SD = .73$, $t(22) = 2.45$, $p < .05$, indicating that they reported more adaptive behavior in the puppet interview than in the non-puppet interview.

Collectively, these comparisons did not tell a coherent story, as no particular effect of interview administration sequence or child sex applied to both report variables. They did, however, provide some evidence that prior interview experience, and the sex of a child, may moderate the influence of interview technique on child reporting behavior.

A final aspect of child response disposition was examined by considering the relationship between DES and TAF. The former correlated with the latter strongly and significantly for the non-puppet interview, $r = .45$, $p < .05$, and moderately but insignificantly for the puppet interview, $r = .38$, $p > .05$, offering some evidence to confirm an expected general association between them. Report-version difference scores in these two variables, however, correlated weakly and insignificantly, $r = .15$, $p > .05$, offering no evidence that interview technique jointly affected the reporting of socially desirable and adaptive behavior.

Table 1: Scores on Individual BPI Scales

Measure	Parent Report		Child Report	
	Behavior ^a	Self-Perception ^b	Non-Puppet ^a	Puppet ^a
Academic Competence				
<i>Mdn</i>	1.94	1.94	2.00	2.00
<i>Q3 – Q1</i>	0.11	0.19	0.00	0.00
Aggression and Hostility				
<i>Mdn</i>	1.23	1.20	1.00	1.00
<i>Q3 – Q1</i>	0.20	0.20	0.20	0.20
Depression and Anxiety				
<i>Mdn</i>	1.20	1.23	1.10	1.00
<i>Q3 – Q1</i>	0.13	0.17	0.11	0.11
Peer Acceptance				
<i>Mdn</i>	1.83	1.77	1.88	2.00
<i>Q3 – Q1</i>	0.17	0.21	0.25	0.13
Social Competence				
<i>Mdn</i>	1.73	1.63	1.80	1.63
<i>Q3 – Q1</i>	0.33	0.32	0.20	0.50

^a *N* = 26. ^b *N* = 24.

Table 2: Scores on Total Adaptive Functioning and Social Desirability

Measure	Parent Report				Child Report			
	Behavior ^a	Self-Perception ^b	Difference ^b	<i>t</i>	Non-Puppet ^a	Puppet ^a	Difference ^a	<i>t</i>
Total Adaptive Functioning								
<i>M</i>	1.79	1.77	-0.019	-1.55	1.88	1.89	0.012	1.30
<i>SD</i>	0.09	0.08	0.060		0.06	0.07	0.047	
Social Desirability								
<i>M</i>					1.48	1.51	0.029	0.86
<i>SD</i>					0.27	0.30	0.171	

Note. All *t*-statistics were non-significant.

^a *N* = 26. ^b *N* = 24.

Table 3: Child Report-Version Difference Scores on Social Desirability

Sequence ^a	Sex		Total ^b
	Girls	Boys	
Non-Puppet			
<i>M</i>	0.150 ^c	0.074	0.112
<i>SD</i>	0.089	0.171	0.149
<i>n</i>	5	9	14
Puppet			
<i>M</i>	-0.133 ^c	0.096	-0.019
<i>SD</i>	0.121	0.125	0.122
<i>n</i>	8	4	12
Total ^b			
<i>M</i>	0.008	0.085	0.047
<i>SD</i>	0.110	0.160	0.137
<i>n</i>	13	13	26

Note. Difference scores are Puppet – Non-Puppet.

^a Interview version first administered.

^b Means for combined groups are unweighted.

^c Means differ at $p < .01$ by post-hoc t -test.

Table 4: Analysis of Variance for Child Report-Version Difference Scores on Social Desirability

Source	<i>SS</i> ^a	<i>df</i>	<i>MS</i> ^a	<i>F</i>	<i>eta</i>
Sequence	1.70	1	1.70	5.26*	.44*
Sex	0.59	1	0.59	1.81	.28
Sequence x Sex	2.33	1	2.33	7.19*	.50*
Error ^b		22	0.32		

Note. Difference scores are Puppet – Non-Puppet. Analysis method is by unweighted means.

^a Values are multiplied by 100 for readability.

^b Error from one-way analysis, divided by harmonic mean of subsample sizes, $N_h = 5.83$.

* $p < .05$

Table 5: Child Report-Version Difference Scores on Total Adaptive Functioning

Sequence ^a	Sex		Total ^b
	Girls	Boys	
Non-Puppet			
<i>M</i>	-0.006	0.039	0.017
<i>SD</i>	0.040	0.041	0.041
<i>n</i>	5	9	14
Puppet			
<i>M</i>	-0.012	0.024	0.006
<i>SD</i>	0.051	0.038	0.047
<i>n</i>	8	4	12
Total ^b			
<i>M</i>	-0.009	0.032 ^c	0.011
<i>SD</i>	0.047	0.040	0.044
<i>n</i>	13	13	26

Note. Difference scores are Puppet – Non-Puppet.

^a Interview version first administered.

^b Means for combined groups are unweighted.

^c Mean differs from zero at $p < .05$ by post-hoc t -test.

Table 6: Analysis of Variance for Child Report-Version Difference Scores on Total Adaptive Functioning

Source	<i>SS</i> ^a	<i>df</i>	<i>MS</i> ^a	<i>F</i>	<i>eta</i>
Sequence	0.011	1	0.011	0.33	.12
Sex	0.164	1	0.164	4.96*	.43*
Sequence x Sex	0.002	1	0.002	0.06	.05
Error ^b		22	0.033		

Note. Difference scores are Puppet – Non-Puppet. Analysis method is by unweighted means.

^a Values are multiplied by 100 for readability.

^b Error from one-way analysis, divided by harmonic mean of subsample sizes, $N_h = 5.83$.

* $p < .05$

Parent Report Mean Scores

Two additional hypotheses tested in this study concerned expected differences between parents' reports of child behavior (B) and their reports of child self-perception (C). One prediction was that mothers would describe their children's behavior as generally less adaptive than their children perceived it to be.

Non-parametric statistics for the individual BPI scales by parent report are presented in Table 1. Score distributions for the parent measures showed somewhat lower skewness and higher variability than those for the child measures, a fact evident in less extreme values for most of the medians and interquartile ranges, and at least partly attributable to the greater range of response options for the survey than the interview items.

Table 2 presents means for the parent report versions of TAF, and for score differences (C – B) between them. A small, non-significant effect, opposite to the direction hypothesized, was obtained for the latter, $M/SD = -0.32$, $t(23) = -1.55$, $p > .05$.³ A comparison of the score differences for girls with those for boys, $M/SD = -0.20$, $t(22) = -0.46$, $p > .05$, also yielded a small and non-significant result. Thus, mothers did not systematically rate their children's behavior as less (or, alternatively, more) adaptive than their children perceived it to be.

Child Report Predictive Strength

A second prediction regarding the effects of interview administration technique was that children would provide generally more accurate self-

³ Comparisons were possible for 24 of the 26 subjects, as 2 parents declined to rate their children's self-perception.

descriptions in the puppet interview than in the non-puppet interview. Accordingly, child self-report from the former was expected to correlate more strongly than that from the latter with parent survey reports on children.

Table 7 presents intercorrelations among all the parent and child report versions of TAF. The four values in the upper-right portion of the table comprise the possible cross-informant correlations. Differences between adjacent correlations in this group were tested using a meta-analytic procedure given by Meng, Rosenthal, and Rubin (1992) for comparing correlations between each of two variables and a third variable, when all three variables are obtained on a single sample.

One of these comparisons showed that the puppet interview report correlated more strongly than the non-puppet one with the parent report on child behavior: $r(24) = .43, p < .05$; $r(24) = .06, p > .05$; $z = 2.36, p < .01$. Another showed that the puppet interview report correlated more strongly than the non-puppet one with the parent report on child self-perception: $r(24) = .73, p < .001$; $r(24) = .29, p > .05$; $z = 3.31, p < .001$.

Differences between the child reports in their association with each parent report, on TAF, were examined further through multiple regression analysis. Table 8 presents results of a simultaneous regression of parent-reported child behavior on the two interview reports. The large and significant effect for the puppet measure, $pr = .56, t(21) = 3.11, p < .01$, showed that it strongly predicted the parent measure after controlling for the non-puppet measure. Table 9 presents results from a regression of parent-reported child self-perception on the interview reports, which likewise showed a strong, unique effect for the puppet measure, $pr = .79, t(21) = 5.81, p < .0001$.

The regression analysis findings are striking given the large correlation, $r = .72$, $p < .0001$, between the puppet and non-puppet interview reports. Notwithstanding substantial variance shared *between* these two measures ($r^2 = .51$), the puppet measure uniquely accounted for a sizeable proportion of the variance in each parent survey measure ($pr^2 = .32$ and $pr^2 = .62$, respectively, for child behavior and child self-perception).

A final expectation concerning the enhanced accuracy of the puppet interview report was that it would be greater for children comparatively low in parent-rated Attentional Focusing (ATF) and for those comparatively high in parent-rated Shyness (SHY). This hypothesis was tested by determining whether each of the temperament variables moderated the puppet interview report's explanation of unique variance in parent-reported child self-perception. Table 10 presents the results of a hierarchical regression analysis that extended the model of Table 9. A product term constructed from the ATF ($M = 5.21$, $SD = 0.64$, $N = 26$) and puppet interview measures, entered in Step 2, yielded a small and non-significant effect in the hypothesized direction, $pr = -.14$, $B = -0.24$, $t(19) = -0.62$, $p > .05$. Table 11 presents the results of an analogous regression involving the SHY ($M = 3.55$, $SD = 1.17$, $N = 26$) measure, in which the product term yielded a moderate and non-significant effect opposite to the hypothesized direction, $pr = -.28$, $B = -0.16$, $t(19) = -1.29$, $p > .05$. Thus, neither result supported the hypothesis.

Table 7: Intercorrelations for Total Adaptive Functioning

Measure Version	Parent Report		Child Report	
	Behavior	Self-Perception	Non-Puppet	Puppet
Parent Report				
Behavior	--	.76 ****	.06 _a	.43 _b *
Self-Perception		--	.29 _c	.73 _d ****
Child Report				
Non-Puppet			--	.72 ****
Puppet				--

Note. $N = 24$. Subscript pairs denote correlations differing by one-tailed z-test.

$a,b p < .01$. $a,c p < .06$. $b,d p < .01$. $c,d p < .001$.

* $p < .05$, two-tailed. **** $p < .0001$, two-tailed.

Table 8: Simultaneous Regression Analysis of Total Adaptive Functioning Measures: Prediction of Parent-Reported Child Behavior from Child Interview Reports

Child Report Version	<i>B</i>	<i>SE B</i>	<i>t</i>
[Intercept]	1.10	0.52	2.10*
Non-Puppet	-0.76	0.38	-2.02
Puppet	1.12	0.36	3.11**

Note. $R^2 = .32$, $F(2,21) = 4.88$, $p < .05$.

* $p < .05$. ** $p < .01$.

Table 9: Simultaneous Regression Analysis of Total Adaptive Functioning Measures: Prediction of Parent-Reported Child Self-Perception from Child Interview Reports

Child Report Version	<i>B</i>	<i>SE B</i>	<i>t</i>
[Intercept]	0.41	0.33	1.22
Non-Puppet	-0.62	0.24	-2.59*
Puppet	1.34	0.23	5.81****

Note. $R^2 = .65$, $F(2,21) = 19.48$, $p < .0001$.

* $p < .05$. **** $p < .0001$.

Table 10: Hierarchical Regression Analysis of Total Adaptive Functioning Measures: Prediction of Parent-Reported Child Self-Perception from Child Interview Reports and Attentional Focusing

Measure	<i>B</i>	<i>SE B</i>	<i>t</i>
Step 1			
Intercept	0.46	0.37	1.26
Non-Puppet Interview	-0.64	0.25	-2.56*
Puppet Interview (P)	1.35	0.24	5.70****
Attentional Focusing (ATF)	-0.01	0.02	-0.40
Step 2			
P x ATF	-0.24	0.39	-0.62

Note. For Step 1, $R^2 = .65$, $F(3,20) = 12.52$, $p < .0001$. For Step 2, $\Delta R^2 = .01$, $F(1,19) = 0.38$, $p > .05$.

* $p < .05$. **** $p < .0001$.

Table 11: Hierarchical Regression Analysis of Total Adaptive Functioning Measures: Prediction of Parent-Reported Child Self-Perception from Child Interview Reports and Shyness

Measure	<i>B</i>	<i>SE B</i>	<i>t</i>
Step 1			
Intercept	0.47	0.35	1.35
Non-Puppet Interview	-0.60	0.24	-2.47*
Puppet Interview (P)	1.30	0.24	5.45****
Shyness (SHY)	-0.01	0.01	-0.76
Step 2			
P x SHY	-0.16	0.12	-1.29

Note. For Step 1, $R^2 = .66$, $F(3,20) = 12.92$, $p < .0001$. For Step 2, $\Delta R^2 = .03$, $F(1,19) = 1.67$, $p > .05$.

* $p < .05$. **** $p < .0001$.

Parent Report Predictive Strength

A second prediction regarding the two types of parent report was that mothers' reports of child self-perception would prove more comparable than those of child behavior to children's self-reports. Accordingly, the former were expected to correlate more strongly than the latter with the child interview reports.

Remaining comparisons of the cross-informant correlations presented in Table 7 showed that the parent report on child self-perception correlated more strongly than the one on child behavior with the non-puppet interview report (this difference was marginally significant): $r = .29, p > .05$; $r = .06, p > .05$; $z = 1.62, p < .06$. They also showed that the former correlated more strongly than the latter with the puppet interview report: $r = .73, p < .0001$; $r = .43, p < .05$; $z = 2.63, p < .01$. Results from a simultaneous regression of the non-puppet interview report on the two parent survey reports, presented in Table 12, proved non-significant; but those from a regression of the puppet interview report on the survey reports, presented in Table 13, yielded a large and significant effect for the child self-perception measure, $\beta = .70, t(21) = 4.43, p < .001$. Notably, despite the large correlation between the two survey measures, $r = .76, p < .0001$, which indicated substantial variance shared between them ($r^2 = .58$), the self-perception measure uniquely accounted for a sizeable proportion of the variance in the puppet interview measure ($\beta r^2 = .48$).

Table 12: Simultaneous Regression Analysis of Total Adaptive Functioning Measures: Prediction of Non-Puppet Interview Report from Parent Survey Reports

Parent Report Version	<i>B</i>	<i>SE B</i>	<i>t</i>
[Intercept]	1.55	0.28	5.53****
Child Behavior	-0.28	0.21	-1.31
Child Self-Perception	0.47	0.24	1.94

Note. $R^2 = .15$, $F(2,21) = 1.92$, $p > .05$.

**** $p < .0001$.

Table 13: Simultaneous Regression Analysis of Total Adaptive Functioning Measures: Prediction of Puppet Interview Report from Parent Survey Reports

Parent Report Version	<i>B</i>	<i>SE B</i>	<i>t</i>
[Intercept]	0.91	0.21	4.38***
Child Behavior	-0.22	0.16	-1.42
Child Self-Perception	0.78	0.18	4.43***

Note. $R^2 = .58$, $F(2,21) = 14.43$, $p < .0001$.

*** $p < .001$.

Perspective on Parent-Child Report Correspondence

Although the meta-analytic procedure given by Meng et al. (1992) permitted comparisons only between adjacent pairs of the cross-informant correlations for TAF in Table 7, these comparisons were sufficient to obtain a partial rank ordering. The correlation between the puppet interview and parent-reported self-perception was higher than the one between the puppet interview and parent-reported behavior, and it was higher than the one between the non-puppet interview and parent-reported self-perception. Each of these latter correlations, in turn, was higher than the one between the non-puppet interview and parent-reported behavior. Accordingly, the correlation between the puppet interview and parent-reported self-perception was higher than the one between the non-puppet interview and parent-reported behavior. The magnitude of difference between these diagonally opposite correlations, in fact, apparently reflected roughly additive effects of child interview technique and parent report type on cross-informant correlation strength.

Further perspective on the cross-informant correlations in this study may be gained by comparing them with those from Achenbach's (1987) meta-analytic study. Achenbach obtained an average correlation of .25 ($df = 6,262$) between children's and adolescents' self-reports and their parents' ratings of behavioral and emotional problems. Comparisons of the cross-informant correlations in Table 7 with this value revealed that only the one between the puppet interview and parent-reported self-perception was statistically different, $z = 3.08, p < .01$.

DISCUSSION

The main purposes of the study described here were to determine whether a novel child interview technique would yield better self-report data than a conventional one, and to compare parents' ratings of child behavior and child self-perception as possible bases for validating children's self-reports. To conduct the study, a self-report inventory was administered to kindergartners on two occasions a week apart, once with and once without the use of identical hand puppets. Also, a survey was administered to their mothers, which elicited ratings of both child behavior and child self-perception on criteria assessed in the interviews. Four hypotheses were framed, based on a review of child self-report and play-based assessment literature, which were tested through analyses of the child interview and parent survey responses. In what follows, I shall discuss the findings separately for each hypothesis.

Child Report Mean Scores

Two of the hypotheses tested concerned expected effects of interview technique on child response behavior. One prediction was that using puppets to administer the self-report inventory would foster children's forthright self-disclosure, and thus a decrease in their socially desirable responding (SDR) and their reported levels of adaptive behavior. For children as a whole, this expectation was unfulfilled: mean scores on measures of Social Desirability (DES) and Total Adaptive Functioning (TAF) were statistically unchanged between the puppet and non-puppet assessment conditions. Within subsamples, however, some complex effects emerged. For girls, DES scores were comparatively lower in the puppet interview among those receiving it first, and comparatively higher in the puppet interview among those receiving it

second, by a margin that distinguished these subgroups statistically. For boys, TAF scores were comparatively higher in the puppet interview overall.

Although the findings obtained here did not support the hypothesis, there are reasons to defer any firm conclusions about the effects of puppetry on children's self-disclosure within structured interviews. One of these is that the interaction effects obtained, notwithstanding their apparent incoherence, may imply the need for more complex models than the one developed here to understand the relationships between interview administration technique and child response behavior. These models might consider why the sex of a child, or prior experience with an interview or interviewer, might affect the child's response to the interview task and any use of puppetry within it.

A second reason for caution is that SDR in the non-puppet interview may itself have been substantially reduced, compared with levels elicited by blunt questioning, through the technique of asserting that at least "some kids" are described by the undesirable pole of each trait dichotomy presented. Arguably, there was no evidence that the use of puppetry *enhances* this technique, but it would make sense to evaluate the use of puppetry and the normative ownership of shortcomings distinctly as methods of reducing SDR, perhaps within the context of a factorial experimental design.

A third reason for caution is uncertainty in the conceptualization and measurement of SDR. Two main varieties of SDR exist (Paulhus, 1991), reflecting either a disposition towards deliberately favorable self-presentation (*impression management*) or one towards unrealistic self-appraisal (*positive self-deception*). Each variety of SDR would be consistent with the general association between DES and TAF scores observed in this study, although the

former alone might be expected to diminish under conditions that enhance forthright self-disclosure. Studies conducted with the YCSD (Ford, 1970) support its convergent validity as a measure of impression management, but not its discriminant validity regarding positive self-deception.⁴ Moreover, the possibility exists that not all kindergarten children clearly understand, or carefully attend to, the temporal quantifiers *sometimes*, *always*, and *never*, which constitute a vital part of each YCSD item. This limitation could diminish the instrument's distinctness from a conventional measure of adaptive social functioning.

Parent Report Mean Scores

Two additional hypotheses tested in this study concerned expected differences between parents' reports of child behavior and their reports of child self-perception. One prediction was that mothers would find young children's self-perceptions to be positively biased by wishful thinking, and would thus describe their children's functioning as less adaptive on their own views than on their children's views. This expectation was also unfulfilled: mean TAF scores for child behavior did not differ statistically from those for child self-perception. The distribution of differences between these parent measures did include both positive and negative values, however, which suggests that parents find discrepancies between their children's behavior and self-perception in both directions.

An implication of this finding is that adult informants' dual reports might help to identify significant discrepancies between children's behavior and self-

⁴ In a recent search through psychological indexing and abstracting databases, I found very few investigations of SDR in young children using *any* instrument.

perception (e.g., under- or over-appraisals of adaptive social functioning). Adding parents' reports of child self-perception to clinical assessment batteries could thus provide a useful adjunct to diagnosis and treatment planning.

An issue to consider in the parent survey is the side-by-side rating format for eliciting the two report types. This format may have encouraged parents to reflect deliberately on the relationship between their children's behavior and self-perception, in ways that encouraged them to make fine distinctions. Of some interest would be the possibility that ratings elicited on separate occasions and survey forms would evince different relationships.

Child Report Predictive Strength

A second prediction regarding the effects of interview technique on child response behavior was that children's self-descriptions in the puppet interview would prove more accurate than those in the non-puppet interview, and would therefore correspond more closely with parents' reports of child behavior and child self-perception. This expectation was clearly fulfilled: TAF scores from the puppet interview correlated more strongly than those from the non-puppet interview with TAF scores from both parent reports. Further analyses showed that puppet interview scores, notwithstanding their strong correlation with non-puppet interview scores, accounted for substantial unique variance in parent report scores. The enhanced predictive strength of the puppet interview, however, was not greater among children rated by their parents as comparatively low in attentional focusing or comparatively high in shyness.

Insofar as parents' reports were genuinely descriptive of children, these findings strongly imply that the puppet interview reports contained more information about child behavior and child self-perception than the non-puppet

ones contained. There are, however, reasons to defer strong conclusions about the effect of puppetry per se on children's responses to structured interview questions.

Informal observation of children's videotaped response behavior yielded some evidence that children had more difficulty grasping descriptive content in the non-puppet interview than the puppet interview. In particular, they seemed more likely to require item repetition before they attempted a response, and to lose the syntactic structure and speak unintelligibly when reiterating descriptive sentences. A review of the question formats indeed suggests that linguistic processing demands are greater in the non-puppet than the puppet interview. In the former but not the latter, a child must shift from third-person to first-person syntax to reframe sentences in self-descriptive terms. This may be especially challenging for certain peer relationship items, in which the third-person terms "some kids" and "other kids" both appear within a passive construction (e.g., "Some kids don't get told mean things by other kids.")

This confound precludes any attribution of enhanced results from the puppet interview to the effects of puppetry itself. One can, at best, conclude that using identical hand puppets to "speak for themselves" works better than making reference to indefinite third-parties, as a means of prompting young children to choose between opposing self-descriptions. This conclusion might well justify using the puppet interview technique evaluated here, if the normative ownership of shortcomings were shown to be important in eliciting children's forthright self-disclosure (see discussion above). It would also make sense, however, to evaluate puppetry and sentence syntax distinctly as potential influences on interview effectiveness.

Of further concern is that the parent-rated measures of children's attentional focusing and shyness lacked association to the puppet interview's enhanced predictive power. Although these variables were not manipulated as experimental factors, their moderation of this enhancement would have favored its attribution to puppetry effects. It would make sense in future investigations to examine more rigorously the ways in which puppetry is expected to influence children's responsiveness to an interview procedure. One could, for example, measure children's attentive or inhibited behavior within the interview itself, through direct observations.

Parent Report Predictive Strength

A second prediction regarding the two types of parent report was that mothers' ratings of child self-perception would prove more comparable than those of child behavior to children's self-descriptions. This expectation was clearly fulfilled: survey-based TAF scores for child self-perception correlated more strongly than those for child behavior with TAF scores from the puppet and (arguably) non-puppet interviews. Further analyses showed that child self-perception scores, notwithstanding their strong correlation with child behavior scores, accounted for substantial unique variance in puppet interview scores.

These findings support the notion that children's self-reports, even when they are behaviorally oriented, should be regarded as measures more of child self-perception than of child behavior. One implication of this notion is that adult informants' ratings of child self-perception may be more appropriate than those of child behavior as bases for validating children's self-report instruments. Another is that children's self-report instruments may be most

useful in those contexts where child self-perceptions are themselves a focus of clinical concern.

There is, however, another sense in which the superior correlations obtained between child self-descriptions and parent-reported child self-perceptions may be significant. Their strength (the one for the puppet interview was quite substantial) implies that mothers were highly cognizant of their children's self-perceptions, even when they deviated from the mothers' own behavioral impressions. Of course, mothers may have elicited their children's self-descriptions while completing the surveys, despite instructions that encouraged them to complete the ratings independently. A plausible alternative explanation is that they knew how their children viewed themselves because they tend to communicate about the relevant subject matters. Indeed, the highly educated population studied here is one in which parents are likely to emphasize verbal interaction with their children. More generally, studies of other populations may reveal associations between parent-child relationship characteristics and parent-child report correspondences, in ways that have diagnostic usefulness.

Conclusions and Future Directions

In summary, the study described here examined kindergartners' self-reports on a behavioral inventory administered with and without the use of hand puppets, in connection with maternal survey reports of child behavior and child self-perception on the inventory criteria. The findings were that children's socially desirable responding was not generally lower in the puppet interview than the non-puppet one, although their self-reports of adaptive behavior did correlate more strongly with maternal reports of their behavior and

self-perception; and that mothers' reports of children's self-perceived adaptive behavior were not generally higher than those of children's actual adaptive behavior, although they did correlate more strongly with children's self-reports from both interviews.

At a minimum, this study's findings support the notion that alternative assessment techniques and validity criteria should be compared directly within particular empirical studies. The factors of child interview technique and parent report type *each* affected cross-informant report correspondence, an important index of assessment validity. This type of comparative evaluation seems vitally important to making informed decisions about assessment tools, but most assessment research to date has focused upon individual instruments, techniques, or types of validity criterion.

Beyond this minimum, the study offers some support for the putative usefulness of puppetry in conducting structured interviews with young children. This support is equivocal, insofar as the effects of puppetry were not clearly separable from those of another factor (i.e., linguistic complexity) that distinguished the interview approaches tested; and some effects expected (i.e., enhancements to self-disclosure) were not observed. There are, however, variations on the procedures conducted here that could address these issues.

For example, the effects of puppetry and linguistic complexity might be disentangled by using identical statement formats in the puppet and non-puppet interview versions. A uniform sentence structure could maintain the subject in the third-person (e.g.: *Some kids worry a lot./Some kids don't worry a lot./How about you?*) or even in the second-person (e.g.: *Do you worry a lot? Or, do you **not** worry a lot?*). Alternatively, the directness of a second-person

question format could be used in a control condition to test whether modeling the ownership of shortcomings reduces socially desirable responding.

Also, the potential effects of puppetry on forthright self-disclosure might be evaluated more fruitfully by interviewing children for whom discussion of particular issues is known to be a significant challenge (e.g., by assessing fears among children who have experienced traumatizing events). Future studies might likewise benefit from a more precise measurement of child interview responses. For example, one could score them according to detailed guidelines, as discussed by Measelle et al. (1998), or elicit them in a two-stage discrimination procedure, as described by Harter (1984).

A final implication of this study's findings is that parents' reports of child self-perceptions are highly relevant to validating child self-report measures. Greater attention to parents' and other informants' reports of child self-perceptions in clinical assessment research and practice would likely alter our perspectives on the meaning and utility of child self-report measures. It might also enhance our knowledge of how the people who care for children relate to them.

APPENDIX 1

Parent Survey Form

* * * *Do not identify yourself or your child on this questionnaire.* * * *

Child Self-Perception Study Parent Questionnaire

This form asks you to describe some of your child's characteristics and tendencies. There are two sections. Please read the instructions carefully for each section before completing it.

Section 1

Instructions

Below you will see a set of statements that describe children's reactions to a number of situations. We would like you to tell us what your child's reaction is likely to be in those situations. There are of course no "correct" ways of reacting; children differ widely in their reactions. Please read each statement and decide whether it is a "true" or "untrue" description of your child's reaction within the past six months. Use the following scale to indicate how well a statement describes your child:

- | Circle # | If the statement is: |
|----------|--------------------------------------|
| 1 | extremely untrue of your child |
| 2 | quite untrue of your child |
| 3 | slightly untrue of your child |
| 4 | neither true nor false of your child |
| 5 | slightly true of your child |
| 6 | quite true of your child |
| 7 | extremely true of your child |

If you cannot answer one of the items because you have never seen the child in that situation, for example, if the statement is about the child's reaction to your singing and you have never sung to your child, then circle NA (not applicable).

Please be sure to circle a number or NA for every item.

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true not untrue	slightly true	quite true	extremely true	NA not applicable

My child:

1. When picking up toys or other jobs, usually keeps at the task until it's done.
1 2 3 4 5 6 7 NA
2. Is comfortable in situations where s/he will be meeting others.
1 2 3 4 5 6 7 NA
3. Sometimes prefers to watch rather than join other children playing.
1 2 3 4 5 6 7 NA
4. Will ignore others when playing with an interesting toy.
1 2 3 4 5 6 7 NA
5. When watching TV, is easily distracted by other noises or movements.
1 2 3 4 5 6 7 NA
6. Seems to be at ease with almost any person.
1 2 3 4 5 6 7 NA
7. Is distracted from her/his projects when you enter the room.
1 2 3 4 5 6 7 NA
8. Gets embarrassed when strangers pay a lot of attention to her/him.
1 2 3 4 5 6 7 NA
9. When practicing an activity, has a hard time keeping her/his mind on it.
1 2 3 4 5 6 7 NA
10. When building or putting something together, becomes very involved in what s/he is doing, and works for long periods.
1 2 3 4 5 6 7 NA

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true not untrue	slightly true	quite true	extremely true	not applicable

My child:

11. Is sometimes shy even around people s/he has known a long time.

1 2 3 4 5 6 7 NA

12. Sometimes seems nervous when talking to adults s/he has just met.

1 2 3 4 5 6 7 NA

13. Has trouble concentrating when listening to a story.

1 2 3 4 5 6 7 NA

14. Acts very friendly and outgoing with new children.

1 2 3 4 5 6 7 NA

15. Often shifts rapidly from one activity to another.

1 2 3 4 5 6 7 NA

16. Joins others quickly and comfortably, even when they are strangers.

1 2 3 4 5 6 7 NA

17. Has difficulty leaving a project s/he has begun.

1 2 3 4 5 6 7 NA

18. When drawing or coloring in a book, shows strong concentration.

1 2 3 4 5 6 7 NA

19. Acts shy around new people.

1 2 3 4 5 6 7 NA

20. Is comfortable asking other children to play.

1 2 3 4 5 6 7 NA

1	2	3	4	5	6	7	NA
extremely untrue	quite untrue	slightly untrue	neither true not untrue	slightly true	quite true	extremely true	not applicable

My child:

21. Sometimes becomes absorbed in a picture book and looks at it for a long time.

1 2 3 4 5 6 7 NA

22. Has a hard time concentrating on an activity when there are distracting noises.

1 2 3 4 5 6 7 NA

23. Talks easily to new people.

1 2 3 4 5 6 7 NA

24. Seems completely at ease with almost any group.

1 2 3 4 5 6 7 NA

25. Will move from one task to another without completing any of them.

1 2 3 4 5 6 7 NA

26. Sometimes turns away shyly from new acquaintances.

1 2 3 4 5 6 7 NA

Please make sure that you have answered each item in this section.

Section 2

Instructions

We would like you to tell us how well each of the following statements describes your child: first, on your view, and second (as far as you can tell) on his or her view. Use the following scale:

- Circle # If the statement is:
- | | |
|---|------------------------|
| 1 | not at all descriptive |
| 2 | a little descriptive |
| 3 | fairly descriptive |
| 4 | very descriptive |

If you cannot answer one of the items because you don't have enough information, then circle DK (don't know).

Please be sure to circle a number or DK for every item.

1	2	3	4	DK
not at all descriptive	a little descriptive	fairly descriptive	very descriptive	DK don't know

My child:

1. Is a happy boy/girl.

your view: 1 2 3 4 DK	child's view: 1 2 3 4 DK
-----------------------	--------------------------

2. Is shy when meeting new people.

your view: 1 2 3 4 DK	child's view: 1 2 3 4 DK
-----------------------	--------------------------

3. Is smart for his/her age.

your view: 1 2 3 4 DK	child's view: 1 2 3 4 DK
-----------------------	--------------------------

4. Does a good job in school.

your view: 1 2 3 4 DK	child's view: 1 2 3 4 DK
-----------------------	--------------------------

5. Hits someone who is mean to him/her.

your view: 1 2 3 4 DK	child's view: 1 2 3 4 DK
-----------------------	--------------------------

1	2	3	4	DK
not at all	a little	fairly	very	DK
descriptive	descriptive	descriptive	descriptive	don't know

My child:

6. Thinks it's funny when a friend gets into trouble.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

7. Has lots of friends at school.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

8. Is sad a lot.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

9. Is "dumb".

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

10. Finds it easy to make new friends.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

11. Is liked by other kids.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

12. Gets cranky a lot.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

13. Worries a lot.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

14. Is included in games with other kids.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

15. Is teased by kids at school.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

1	2	3	4	DK
not at all	a little	fairly	very	DK
descriptive	descriptive	descriptive	descriptive	don't know

My child:

16. Feels bad after fighting with kids.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

17. Learns things well.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

18. Cries a lot.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

19. Is lonely a lot.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

20. Is treated nicely by other kids.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

21. Is good at letters and writing.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

22. Doesn't get nervous if the teacher calls on him/her.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

23. Makes mistakes in school a lot.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

24. Asks kids to play with him/her.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

25. Expects bad things to happen to him/her.

your view:	1	2	3	4	DK	child's view:	1	2	3	4	DK
------------	---	---	---	---	----	---------------	---	---	---	---	----

1	2	3	4	DK
not at all	a little	fairly	very	don't
descriptive	descriptive	descriptive	descriptive	know

My child:

26. Finds it hard to make new friends.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

27. Is asked by kids at school to play with them.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

28. Gets nervous and scared at school.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

29. Doesn't tease other kids.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

30. Watches when other kids are playing together.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

31. Is regarded by kids as a good friend to have.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

32. Has mean things said to him/her by kids.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

33. Picks on other kids at school.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

34. Doesn't get mad when he/she makes mistakes.

your view: 1 2 3 4 DK child's view: 1 2 3 4 DK

Please make sure that you have answered each item in this section.

APPENDIX 2

Parent Survey Items

Item Number ¹	Child Interview Correspondent
Source: Child Behavior Questionnaire	
Scale: Attentional Focusing	
1: 01	--
1: 04	--
1: 05 *	--
1: 07 *	--
1: 09 *	--
1: 10	--
1: 13 *	--
1: 15 *	--
1: 17	--
1: 18	--
1: 21	--
1: 22 *	--
1: 25 *	--
Scale: Shyness	
1: 02 *	--
1: 03	--
1: 06 *	--
1: 08	--
1: 11	--
1: 12	--
1: 14 *	--
1: 16 *	--
1: 19	--
1: 20 *	--
1: 23 *	--
1: 24 *	--
1: 26	--

¹ Asterisks denote items for which response values are reversed during conventional scoring (i.e., when higher scale scores reflect more of the scale's named quality).

 Parent Survey Items (contd.)

Item Number	Child Interview Correspondent
-------------	----------------------------------

 Source: Berkeley Puppet Interview

Scale: Academic Competence

2: 03	07
2: 04	08
2: 09 *	16
2: 17	28
2: 21	34
2: 23 *	37

Scale: Aggression and Hostility

2: 05	10
2: 06	11
2: 16 *	26
2: 29 *	46
2: 33	52

Scale: Depression and Anxiety

2: 01 *	04
2: 08	14
2: 12	19
2: 13	20
2: 18	29
2: 19	31
2: 22 *	35
2: 25	40
2: 28	44
2: 34 *	53

Scale: Peer Acceptance

2: 07	13
2: 11	22
2: 14	23
2: 15 *	25
2: 20	32
2: 27	43
2: 31	49
2: 32 *	50

Parent Survey Items (contd.)

Item Number	Child Interview Correspondent
-------------	----------------------------------

Source: Berkeley Puppet Interview

Scale: Social Competence

2: 02 *	05
2: 10	17
2: 24	38
2: 26 *	41
2: 30 *	47

APPENDIX 3

Child Interview: Puppet Version^{1,2}

 Seat child.

 Is there a **new** videotape in the camera?

 Start camera **recording**.

Today I'd like to introduce you to some puppet friends of mine. They want to tell you about the ways that they are, and ask you about the ways that you are. Is that okay?

No: Do you want to go back to class?

Yes: Okay. Let's start.

 Put on hand puppets.

—► My name is Flippy.
And my name is Floppy.
I'm glad to meet you.
And I'm glad too.

¹ The typeface size and line spacing have been reduced for reproduction.

² Boldface print within items denotes primary content for disambiguating responses.

Floppy ←

Puppet Version

→ Flippy

1. → I **sometimes play** with **toys**.
I **never play** with **toys**.
How about you?
2. ← I **sometimes play** with **other kids**.
I **always play** by **myself**.
How about you?
3. → I **sometimes argue** with my mother.
I **never argue** with my mother.
How about you?
4. ← I'm **not a happy** kid.
I'm a **happy** kid.
How about you?
5. → I'm **not shy** when I meet new people.
I'm **shy** when I meet new people.
How about you?
6. ← I'm **sometimes not polite** to older people.
I'm **always polite** to older people.
How about you?
7. → I'm **smart**.
I'm **not smart**.
How about you?
8. ← I do a **good job** in school.
I **don't** do a **good job** in school.
How about you?
9. → I **sometimes shout** when I feel angry.
I **never shout** when I feel angry.
How about you?
10. ← If someone is mean to me, I **don't hit** them.
If someone is mean to me, I **hit** them.
How about you?

Floppy ←

Puppet Version

→ Flippy

11. → I think it's **funny** when a **friend** gets into **trouble**.
I **don't** think it's **funny** when a **friend** gets into **trouble**.
How about you?
12. ← I **sometimes** tell a little **lie**.
I **never** tell a little **lie**.
How about you?
13. → I **have** lots of **friends** at school.
I **don't have** lots of **friends** at school.
How about you?
14. ← I'm **sad** a lot.
I'm **not sad** a lot.
How about you?
15. → I **never hit** another kid.
I **sometimes hit** another kid.
How about you?
16. ← I'm **not dumb**.
I'm **dumb**.
How about you?
17. → It's **hard** for me to **make** new **friends**.
It's **not hard** for me to **make** new **friends**.
How about you?
18. ← I **always help** people.
I **sometimes don't help** people.
How about you?
19. → I **get cranky** a lot.
I **don't get cranky** a lot.
How about you?
20. ← I **worry** a lot.
I **don't worry** a lot.
How about you?

Floppy ←

Puppet Version

→ Flippy

21. → I **never show off** to my friends.
I **sometimes show off** to my friends.
How about you?
22. ← Kids **don't like** me.
Kids **like** me.
How about you?
23. → Kids **let me play** games with them.
Kids **don't let me play** games with them.
How about you?
24. ← I **never say mean things** to people.
I **sometimes say mean things** to people.
How about you?
25. → Kids at school **tease me**.
Kids at school **don't tease me**.
How about you?
26. ← I **feel bad** after I **fight** with kids.
I **don't feel bad** after I **fight** with kids.
How about you?
27. → I **sometimes feel like throwing** or **breaking** things.
I **never feel like throwing** or **breaking** things.
How about you?
28. ← I **don't learn** things well.
I **learn** things well.
How about you?
29. → I **don't cry** a lot.
I **cry** a lot.
How about you?
30. ← I **sometimes** act **naughty**.
I **never** act **naughty**.
How about you?

Floppy ←

Puppet Version

→ Flippy

31. → I'm **not lonely** a lot.
I'm **lonely** a lot.
How about you?
32. ← Kids are **nice** to me.
Kids are **not nice** to me.
How about you?
33. → I **sometimes don't listen** to my parents.
I **always listen** to my parents.
How about you?
34. ← I'm **good** at **letters** and **writing**.
I'm **not good** at **letters** and **writing**.
How about you?
35. → I **get nervous** if my teacher calls on me.
I **don't get nervous** if my teacher calls on me.
How about you?
36. ← I **sometimes don't wash** my **hands** before every meal.
I **always wash** my **hands** before every meal.
How about you?
37. → I **don't make mistakes** in school a lot.
I **make mistakes** in school a lot.
How about you?
38. ← I **don't ask** kids to **play** with me.
I **ask** kids to **play** with me.
How about you?
39. → I **never feel like making fun** of other people.
I **sometimes feel like making fun** of other people.
How about you?
40. ← I **don't think bad things will happen** to me.
I **think bad things will happen** to me.
How about you?

Floppy ←

Puppet Version

→ Flippy

41. → It's **hard** for me to **make** new **friends**.
It's **easy** for me to **make** new **friends**.
How about you?
42. ← I **never forget** to say "please" and "thank you".
I **sometimes forget** to say "please" and "thank you".
How about you?
43. → Kids at my school **don't ask** me to **play** with them.
Kids at my school **ask** me to **play** with them.
How about you?
44. ← I **get nervous** and **scared** at school.
I **don't get nervous** and **scared** at school.
How about you?
45. → I **never get angry**.
I **sometimes get angry**.
How about you?
46. ← I **tease** other kids.
I **don't tease** other kids.
How about you?
47. → If kids are playing together, I **ask** if I can **play**.
If kids are playing together, I **watch** them.
How about you?
48. ← I'm **always nice** to people.
I'm **sometimes not nice** to people.
How about you?
49. → Kids **do not think** I'm a **good friend** to have.
Kids **think** I'm a **good friend** to have.
How about you?
50. ← Kids **do not say mean things** to me.
Kids **say mean things** to me.
How about you?

Floppy ←

Puppet Version

→ Flippy

51. → I **sometimes don't do the right things.**
I **always do the right things.**
How about you?
52. ← I **pick on** other kids at school.
I **don't pick on** other kids at school.
How about you?
53. → I **don't get mad** when I make mistakes.
I **get mad** when I make mistakes.
How about you?
54. ← I **always tell the truth.**
I **sometimes don't tell the truth.**
How about you?

Well, that's all the questions Flippy and Floppy have for you. Thanks very much.

 Take off hand puppets.

 Offer choice of reward sticker.

 Return to class.

APPENDIX 4

Child Interview: Non-Puppet Version^{1,2}

 Seat child.

 Is there a **new** videotape in the camera?

 Start camera **recording**.

Today I'd like to tell you about some different ways that kids can be, and ask you about the ways that you are. Is that okay?

No: Do you want to go back to class?

Yes: Okay. Let's start.

¹ The typeface size and line spacing have been reduced for reproduction.

² Boldface print within items denotes primary content for disambiguating responses.

Non-Puppet Version

1. Some kids **sometimes play** with **toys**.
Some kids **never play** with **toys**.
How about you?
2. Some kids **sometimes play** with **other kids**.
Some kids **always play** by **themselves**.
How about you?
3. Some kids **sometimes argue** with their mothers.
Some kids **never argue** with their mothers.
How about you?
4. Some kids are **not happy**.
Some kids are **happy**.
How about you?
5. Some kids are **not shy** when they meet new people.
Some kids are **shy** when they meet new people.
How about you?
6. Some kids are **sometimes not polite** to older people.
Some kids are **always polite** to older people.
How about you?
7. Some kids are **smart**.
Some kids are **not smart**.
How about you?
8. Some kids do a **good job** in school.
Some kids **don't** do a **good job** in school.
How about you?
9. Some kids **sometimes shout** when they feel angry.
Some kids **never shout** when they feel angry.
How about you?
10. Some kids **don't hit** someone who is mean to them.
Some kids **hit** someone who is mean to them.
How about you?

Non-Puppet Version

11. Some kids think it's **funny** when a **friend** gets into **trouble**.
Some kids don't think it's **funny** when a **friend** gets into **trouble**.
How about you?
12. Some kids **sometimes** tell a little **lie**.
Some kids **never** tell a little **lie**.
How about you?
13. Some kids **have** lots of **friends** at school.
Some kids **don't have** lots of **friends** at school.
How about you?
14. Some kids are **sad** a lot.
Some kids are **not sad** a lot.
How about you?
15. Some kids **never hit** another kid.
Some kids **sometimes hit** another kid.
How about you?
16. Some kids are **not dumb**.
Some kids are **dumb**.
How about you?
17. It's **hard** for some kids to **make** new **friends**.
It's **not hard** for some kids to **make** new **friends**.
How about you?
18. Some kids **always help** people.
Some kids **sometimes don't help** people.
How about you?
19. Some kids **get cranky** a lot.
Some kids **don't get cranky** a lot.
How about you?
20. Some kids **worry** a lot.
Some kids **don't worry** a lot.
How about you?

Non-Puppet Version

21. Some kids **never show off** to their friends.
Some kids **sometimes show off** to their friends.
How about you?
22. Some kids are **not liked** by other kids.
Some kids are **liked** by other kids.
How about you?
23. Some kids are **let into** other kids games.
Some kids are **not let into** in other kids games.
How about you?
24. Some kids **never say mean things** to people.
Some kids **sometimes say mean things** to people.
How about you?
25. Some kids are **teased** at school by other kids.
Some kids are **not teased** at school by other kids.
How about you?
26. Some kids **feel bad** after they **fight** with other kids.
Some kids **don't feel bad** after they **fight** with other kids.
How about you?
27. Some kids **sometimes feel like throwing** or **breaking** things.
Some kids **never feel like throwing** or **breaking** things.
How about you?
28. Some kids **don't learn** things well.
Some kids **learn** things well.
How about you?
29. Some kids **don't cry** a lot.
Some kids **cry** a lot.
How about you?
30. Some kids **sometimes act naughty**.
Some kids **never act naughty**.
How about you?

Non-Puppet Version

31. Some kids are **not lonely** a lot.
Some kids are **lonely** a lot.
How about you?
32. Some kids are **treated nicely** by other kids.
Some kids are **not treated nicely** by other kids.
How about you?
33. Some kids **sometimes don't listen** to their parents.
Some kids **always listen** to their parents.
How about you?
34. Some kids are **good** at **letters** and **writing**.
Some kids are **not good** at **letters** and **writing**.
How about you?
35. Some kids **get nervous** if their teacher calls on them.
Some kids **don't get nervous** if their teacher calls on them.
How about you?
36. Some kids **sometimes don't wash** their **hands** before every meal.
Some kids **always wash** their **hands** before every meal.
How about you?
37. Some kids **don't make mistakes** in school a lot.
Some kids **make mistakes** in school a lot.
How about you?
38. Some kids **don't ask** other kids to **play** with them.
Some kids **ask** other kids to **play** with them.
How about you?
39. Some kids **never feel like making fun** of other people.
Some kids **sometimes feel like making fun** of other people.
How about you?
40. Some kids **don't think bad things will happen** to them.
Some kids **think bad things will happen** to them.
How about you?

Non-Puppet Version

41. It's **hard** for some kids to **make** new **friends**.
It's **easy** for some kids to **make** new **friends**.
How about you?
42. Some kids **never forget** to say "please" and "thank you".
Some kids **sometimes forget** to say "please" and "thank you".
How about you?
43. At school, some kids **don't get asked** by other kids to **play**.
At school, some kids **get asked** by other kids to **play**.
How about you?
44. Some kids **get nervous** and **scared** at school.
Some kids **don't get nervous** and **scared** at school.
How about you?
45. Some kids **never get angry**.
Some kids **sometimes get angry**.
How about you?
46. Some kids **tease** other kids.
Some kids **don't tease** other kids.
How about you?
47. If other kids are playing, some kids **ask** if they can **play** too.
If other kids are playing, some kids **watch** them.
How about you?
48. Some kids are **always nice** to people.
Some kids are **sometimes not nice** to people.
How about you?
49. Some kids are **not known** as **good friends** to have.
Some kids are **known** as **good friends** to have.
How about you?
50. Some kids **don't get told mean things** by other kids.
Some kids **get told mean things** by other kids.
How about you?

Non-Puppet Version

51. Some kids **sometimes don't do the right things.**
Some kids **always do the right things.**
How about you?
52. Some kids **pick on** other kids at school.
Some kids **don't pick on** other kids at school.
How about you?
53. Some kids **don't get mad** when they make mistakes.
Some kids **get mad** when they make mistakes.
How about you?
54. Some kids **always tell the truth.**
Some kids **sometimes don't tell the truth.**
How about you?

Well, that's all the questions I have for you. Thanks very much.

 Offer choice of reward sticker.

 Return to class.

APPENDIX 5

Child Interview Items

Item Number ¹	Parent Survey Correspondent
Source: Young Children's Social Desirability Questionnaire	
Scale: Practice (Not Scored)	
01	--
02	--
Scale: Social Desirability	
03	--
06	--
09	--
12	--
15 *	--
18 *	--
21 *	--
24 *	--
27	--
30	--
33	--
36	--
39 *	--
42 *	--
45 *	--
48 *	--
51	--
54 *	--

¹ Asterisks denote items for which response values are reversed during conventional scoring (i.e., when higher scale scores reflect more of the scale's named quality).

 Child Interview Items (contd.)

Item Number	Parent Survey Correspondent
-------------	--------------------------------

 Source: Berkeley Puppet Interview

Scale: Academic Competence

07 *	2: 03
08 *	2: 04
16 *	2: 09
28	2: 17
34 *	2: 21
37 *	2: 23

Scale: Aggression and Hostility

10	2: 05
11 *	2: 06
26	2: 16
46 *	2: 29
52 *	2: 33

Scale: Depression and Anxiety

04 *	2: 01
14 *	2: 08
19 *	2: 12
20 *	2: 13
29	2: 18
31	2: 19
35 *	2: 22
40	2: 25
44 *	2: 28
53	2: 34

Scale: Peer Acceptance

13 *	2: 07
22	2: 11
23 *	2: 14
25	2: 15
32 *	2: 20
43	2: 27
49	2: 31
50 *	2: 32

Child Interview Items (contd.)

Item Number	Parent Survey Correspondent
-------------	--------------------------------

Source: Berkeley Puppet Interview

Scale: Social Competence

05 *	2: 02
17	2: 10
38	2: 24
41	2: 26
47 *	2: 30

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