

Object Relations and Ego Development: Comparison and Correlates in Middle Childhood

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ABSTRACT The significance of ego development and object relations for adaptation and adjustment in middle childhood was examined in a study of 92 nine- to twelve-year-old children. Subjects completed the Sentence Completion Test (SCT) and the Blatt Object Relations Scale (BORS) in individual sessions. BORS ratings were factor analyzed and a predominant factor of parental nurturance emerged. This factor was positively related to children's self-reported perceptions of parental involvement and autonomy support but was unrelated to the SCT. SCT findings revealed an expected pattern for middle childhood with the preponderance of children falling into impulsive, self-protective, and conformist stages of ego development. Both the SCT and BORS were examined in relation to aspects of children's cognitive and social functioning, assessed via teacher ratings, peer sociometrics, self-evaluations, and academic achievement records. Results showed that the SCT was primarily related to cognitive complexity variables, while the object relations measure was associated with both peer and self-evaluations. These nonoverlapping relations with varied child outcomes are discussed both in terms of methodological limitations and theoretical significance.

Object relational and ego psychological theories represent two alternative approaches to the study of motivation and development. Though

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often contrasted (e.g., Greenberg & Mitchell, 1983), both perspectives postulate evolving series of developmental stages that represent increasing psychological differentiation which in turn is associated with greater adaptive potential (Blatt & Lerner, 1983). To date, most of the comparisons between these two approaches have been exclusively theoretical. The purpose of the present article is to examine empirically two specific approaches to object relations and ego development by employing and comparing selected measures from each and relating them to each other and to a range of developmentally relevant outcomes in middle childhood.

Object Relational Perspective

Object relations theories (Fairbairn, 1952, Jacobson, 1964, Klein, 1932, Winnicott, 1965) often differ in style and terminology but share a common recognition of the crucial impact that early interactions with significant caretakers have upon subsequent personality organization and development. Early recurrent patterns in the experience of self and others are considered to be the foundations upon which subsequent intrapsychic and interpersonal modes of functioning of the individual are constructed, and thus have wide-ranging implications for understanding individual differences and psychopathology.

The process through which early interpersonal experiences come to be reflected in personality organization is conceptualized by several theorists as one of *internalization* (Blatt, Wild, & Ritzler, 1976, Meissner, 1979). According to these formulations, the child's ongoing transactions with caretakers are internalized in the form of *self and object representations* (Blatt & Lerner, 1983). An object representation is a theoretical construct used to describe the cognitive and affective schemata resulting from past interpersonal interactions which organize current interpersonal perceptions and actions (Ryan, Avery, & Grolnick, 1985, Stierlin, 1970).

Considerable research has been directed toward the assessment of self and object representations in recent years, and several techniques are currently available (Blatt & Lerner, 1983, Krohn & Mayman, 1974, Urist, 1977). In the current study we employed the Blatt Object Representation Scale (BORS) (Blatt, Chevron, Quinlan, & Wein, 1981). The BORS is a projective or "operant" (McClelland, 1980) measure used to evaluate the content and structural dimensions of subjects' descriptions of significant others. Children were asked to describe their parents (mother and father separately), and these descriptions were then subjected to ratings

on the various dimensions. Among the characteristics assessed are those related to parental nurturance, support, and nonpunitiveness. More generally the BORS is intended to tap the degree to which the child experiences the parent-child relationship as a *gratifying involvement* (Behrends & Blatt, 1985). A gratifying involvement is one that satisfies the need for relatedness in a context appropriate to the child's developmental level.

In middle childhood we expected that such gratifying involvements must entail, among other things, the perception on the part of the child that the parents are both *positively involved* and *supportive of autonomy*. Involvement, defined as experienced warmth and dedication of time and resources, is important in providing a secure base, while autonomy support conduces toward the tasks of middle childhood that include increased independent mastery and extrafamilial relations (Grolnick & Ryan, 1987; Ryan, Connell, & Grolnick, in press). We thus hypothesized that the BORS measure would directly predict children's self-reports of parental involvement and autonomy support, which would extend the construct validity of the BORS.

Additionally we hypothesized that the BORS should predict aspects of the child's perceived self-worth, social competence, and general adjustment. Theoretically, the parent-child relation provides the basis for these affective/interpersonal aspects of functioning. By contrast, we would not expect the quality of parent-child relations as tapped by the BORS to be related to intellectual or cognitive competence per se. This differential prediction would thus lend credence to the view that object relations perspectives are specifically relevant to those developmental lines involving relatedness to self and others. To test this hypothesis we examined the BORS in relation to measures of self-esteem, perceived competence, adjustment, and peer sociometrics, as well as varied measures of cognitive functioning.

Ego Psychological Perspective

Ego psychology, an outgrowth of Freud's (1923/1961, 1927/1961) structural theory, emphasizes the development and functions of the ego as the adaptational core of the personality. One line of ego psychology has emphasized the issues of relative autonomy of the ego and effectance-related motives, and is represented by Hartmann (1958), Rapaport (1960), White (1963), and others. A second trend in ego psychology has emphasized the integrative or organizational functions of the ego, and can be

traced back to Freud's theory of the synthetic function of the ego (Freud, 1923/1961, Nunberg, 1931) In this approach, ego development refers to the emergence, differentiation, and integration of the functions that serve to maintain the person and orient him/her to the environment

A comprehensive theory of ego development in this latter vein that has gained ascendancy within the past decade is that of Loevinger (1976) In her theory the ego is a conceived process representing the "striving to master, to integrate, to make sense of experience" (Loevinger, 1976, p 85) She stresses the ego's synthetic function (Nunberg, 1931) as essential in that the primary developmental characteristic is one of assimilation and integration into a stable, coherent organization Loevinger describes this process in terms of an invariant, ordered sequence of stages, each of which has an internal coherence and equilibrium, and which is more encompassing and more complex than those preceding it Thus ego development in this framework represents both "a developmental sequence and a dimension of individual differences" (Loevinger, 1976, p 13) Unlike traditional psychoanalytic theory, her work has a decidedly structuralist or cognitive developmental orientation (Loevinger, 1984)

Loevinger and her colleagues (Loevinger, 1985, Loevinger & Wessler, 1970, Loevinger, Wessler, & Redmore, 1970) have developed the Sentence Completion Test (SCT) to assess level of ego development The SCT is widely used and has extensive theoretical and empirical backing (see Broughton, in press, Hauser, 1976, for critical reviews) Evidence has generally supported the proposed model of sequential stages of ego development (Blasi, 1972) In addition, the SCT has shown positive relations with age, IQ, and moral reasoning (Hauser, 1976), all of which may index aspects of cognitive complexity Construct validation, however, has been complicated by the milestone sequence model underlying the SCT which is not always amenable to correlational investigations (Loevinger, 1984)

In this study the SCT was employed to (a) identify ego development levels in a middle childhood population, (b) examine the relations between ego development and a measure of object relations, (c) test for the possibility of linear relations between ego development and specific child attributes during a constrained developmental epoch, and (d) to assess possible interactive effects between object relations and levels of ego development In particular, we expected that the structural emphasis of the SCT would make this assessment pertinent to issues of cognitive development in middle childhood but not to socio-emotional out-

comes—a pattern opposite to that expected for the BORS assessment of object relations. Thus, the SCT was expected to correlate with varied indices of cognitive complexity, namely teacher- and child-rated cognitive competence and standardized achievement test performance. However, because the SCT scoring minimizes the significance of content and affective tone, relations between the SCT and aspects of self-evaluation and/or interpersonal functioning were not expected.

Evidence for this position was recently obtained in clinical studies of adolescent and young adult eating disordered patients (Strauss & Ryan, 1987, 1988). These investigators showed that patients with severe eating pathology (either anorexia nervosa or bulimia) did not differ from matched controls in terms of ego development as measured by the SCT. However, measures of object relations (Urist, 1977) and affective regulation did differentiate between these groups. It was concluded that the SCT is more relevant to issues of cognitive complexity than to emotional and interpersonal adjustment.

Issues in Middle Childhood

In summary, the purpose of the current study was to explore the differential validities of a specific measure of object relations (BORS) and of ego development (SCT) in the prediction of varied childhood outcomes. Explication of these empirical relations was not intended as a stage for competition, but rather as a forum to elaborate the conceptual models associated with these measures within a constrained developmental epoch, namely, middle childhood. Middle childhood, here represented by children from 9 to 12 years of age, was chosen for both theoretical and pragmatic reasons. Both the BORS and the SCT procedures depend upon the child's capacity for verbal representation and production. Pragmatically, then, this represents the youngest age range where the two methods can be reasonably employed. More importantly, middle childhood represents a period in which adaptation to extrafamilial challenges, most notably the academic and peer environments, is a salient developmental task (Ryan, Connell, & Deci, 1985). Accordingly, a variety of measures were employed to evaluate social, cognitive, and self-evaluative characteristics of our child subjects, obtained through self-report, teacher ratings, peer sociometrics, and performance records. It was hoped that this broadband approach could sufficiently survey the range of developmentally pertinent issues.

In applying the BORS and the SCT to this age group, a procedural modification was employed to make the techniques appropriate. Traditionally both the SCT and BORS are written measures. After piloting these measures, it was felt that written protocols hampered assessment, particularly with the younger subjects. As a result, a verbal report strategy was used in which BORS and SCT protocols were taken verbatim by the examiner after a brief rapport-building period. This modification is of additional methodological interest since if successful it could extend the utility of these techniques.

METHOD

Subjects

Subjects were 125 children in the fourth, fifth, and sixth grades at an urban elementary school in upstate New York. The school is a "magnet" school and therefore draws pupils from diverse socioeconomic backgrounds. Sixty percent of the students are ethnic-racial minorities. Ninety-two subjects (with proportionate numbers of boys and girls at each grade level) were randomly selected from the larger sample of 125 for individual testing on selected measures to be described below.

Procedure

In February of the school year, one psychologist and one graduate student in psychology administered, using standardized instructions, the Self-Perception Profile for children (SPP, Harter, 1985), the Parent Orientation Scale (POS, Ryan, Deci, & Grolnick, 1986), and the Child Rating Scale (CRS, Hightower et al., 1986) to 125 subjects in their respective fourth-, fifth-, and sixth-grade classrooms during two 45-minute group-testing sessions.

After these questionnaires were given, 44 boys and 48 girls were randomly selected from this larger sample for individual testing. Between February and June, these 92 subjects were given the BORS (Blatt et al., 1981), the SCT (Loevinger & Wessler, 1970), and the Gesten Class Wheel (GCW) (Gesten, 1979) individually and in that order by a third investigator blind to scores on the group-administered tests.¹ The children were told that the investigator was interested in learning about children's responses to different tasks.

1 The Rorschach test was also administered during these individual sessions, but data from the Rorschach are not included in this report.

In May, teachers of the 92 individually tested children were asked to complete the Teacher Rating Scale of Achievement and Social Adjustment (TRS, Ryan, Avery, & Grolnick, 1985) for each child. Also in May, the children's most recent scores on the Metropolitan Achievement Tests (MAT), 1978 edition, were accessed from school records.

Measures

Blatt Object Representation Scale The BORS (Blatt et al., 1981) is a procedure for evaluating the content and structural dimensions of written descriptions of significant others (e.g., parents). Subjects are typically given a blank sheet of paper with the instructions "Describe your mother" on one page, followed by a request on the next page to "Describe your father." In the present study, children were asked to give their descriptions verbally and the investigator hand-recorded them verbatim. From these descriptions, BORS variables were obtained using procedures specified in the Blatt et al. manual. Conceptual level is scored on a 5-point scale that represents a developmental continuum of increasing differentiation in object representations. Each point along this scale is designed to represent a distinct stage in this sequence. Twelve personal qualities of the parent as represented in the description are rated on 7-point scales. If a particular category is irrelevant or if it is not possible to make a decision, a mean score of 4 is assigned. In addition, ambivalence of the subject with regard to the parent is rated on a 3-point scale, and a score for number of words is also obtained. Interrater reliability (α) for item ratings ranged from .68 to .92. The BORS was normed on adolescent and adult populations. Blatt et al. report a stable three-factor structure to these subscale ratings: Factor 1 = parental nurturance, Factor 2 = parental striving, Factor 3 = verbal fluency. Blatt et al. report interrater coefficient α 's exceeding .9 for Factors 1 and 2.

Loevinger Sentence Completion Test The SCT (Loevinger & Wessler, 1970) is a 36-item sentence completion test designed to assess level of ego development. Subjects are asked to complete a series of sentence stems that are slightly different for boys and girls. In the current study the stems were completed verbally, and responses were recorded verbatim by the examiner. Subjects' responses are individually assigned to one of 10 levels (7 stages and 3 transitional phases) by matching them with response categories provided in the scoring manual. The cumulative frequency distribution of the subject's scores is matched with the protocol templates given by Loevinger and Wessler (1970). From this table of values, the ego development level for the particular configuration is obtained.

Interrater reliability for the SCT is good. Summarized in a review article by Hauser (1976), median interrater correlations ranged between .89 and

92 for self-trained raters on item ratings. Reliability coefficients on the SCT itself have recently been reported by Redmore and Waldman (1975). Using test-retest, split-half, and internal consistency (α) indices, these authors found reliability coefficients between .68 and .91, with values varying dependent upon situational factors (amount of time between tests and explanation given for second testing).

Self-Perception Profile for Children The SPP (Harter, 1985) is a self-report instrument designed to assess elementary schoolchildren's sense of perceived competence in five domains: cognitive, social, behavioral, athletic, and physical appearance, and to assess children's general self-worth, independent of any particular skill domain.

In this study, only the 24 items from the cognitive, social, behavioral, and general subscales were used. These items are presented in a structured alternative format, and are scored on a 1 (low) to 4 (high) competence scale. Four mean scores ranging from 1 to 4 are derived for each child for the cognitive, social, and general items. Cronbach's α coefficients for the four subscales range from .71 to .85. Factor analytic studies also support the use of separate subscale scores. Harter (1982, 1985) has reported extensive construct validation statistics for this measure.

Parent Orientation Scale The POS (Ryan, Deci, & Grolnick, 1986) is a 21-item questionnaire that assesses children's perceptions of the behaviors and attitudes of their mothers and fathers. It uses a similar structured alternative format to that in the SPP (Harter, 1985).

The scale has a consistent two-factor solution for each parent with one factor reflecting involvement and the other reflecting control versus support of autonomy. Factor loadings of items on the two mother factors range from .51 to .72 and on the two similar father factors, from .53 to .79. An example of a mother-involvement item is "Some mothers always have enough time to talk to their children" but "Other mothers don't always have enough time to talk to their children." An example of a mother-autonomy item is "Some mothers talk to their children about behaving so their children will understand what is best for them" but "Other mothers make their children behave because parents know what's best for them." The POS also allows for summary scores for parental involvement and parental autonomy support which is the average of the two parent scores. Ryan et al. (1986) report validity studies on over 1,200 fourth- to sixth-grade subjects. They have found consistent associations with a variety of other parent measures, interview methods, and child outcome measures such as self-esteem, perceived competence, and adjustment.

Child Rating Scale The CRS (Hightower et al., 1986) is a 30-item self-report questionnaire for the elementary school-aged child which assesses

self-perceptions of school adjustment and school problems. Hightower reports a stable five-factor solution (rules, anxiety, social adjustment, self-confidence, immaturity) across four samples representing children in grades 1 to 5 in both urban and suburban settings. Each of the five factors is associated with six items. A summary, total index score is generated by summing the 24 items associated with the first four factors listed and this score represents a score of general adjustment. Interdependency of the four factors associated with the index score is moderate (coefficients range from .14 to .53, with a mean of .24).

Evidence for the construct validity of the CRS has been reported by Hightower et al. (1986). The CRS scores have been shown to discriminate successfully between children in public school who have been previously referred to a special school mental health program (i.e., the Primary Mental Health Project) and those who have not required this service.

Gesten Class Wheel The group-administered GCW (Gesten, 1979) assesses the extent to which children like, and are liked by, their classmates. Children rate all classmates on a 5-point Likert-type scale (1 = "I feel really happy that he/she is in my class", 5 = "I'd really like it if he/she weren't in my class"). The sociometric mean score represents the average of the ratings assigned to a child by classmates. Thus higher scores represent children who are less liked by their peers.

Teacher Rating Scale This rating scale (Ryan, Avery, & Grolnick, 1985) is a 12-item questionnaire for teachers which assesses teacher perceptions of child achievement in school and social adjustment. The questionnaire has two subscales assessing school and social competence. Factor analyses within this study population revealed a two-factor solution supporting the use of the two subscale scores. Ryan, Avery, and Grolnick report that teacher ratings of competence using a similarly formatted scale correlate positively with children's school grades and intelligence (WISC-R IQ scores, Wechsler, 1974). Scores on social adjustment were previously shown to correlate with other self-report measures of social adjustment. The form of the scale is patterned in a structured alternative format that is then converted to a 4-point Likert-type scale.

Metropolitan Achievement Tests The MAT (1978 edition) is a widely used scale which assesses a range of competencies taught in traditional school curricula (Wingard & Bentler, 1978). Split-half reliability coefficients for the MAT are .90 at each grade level. Concurrent validity for the MAT with other standardized achievement tests such as the Wide Range Achievement Tests is .60. Each child receives two standardized scores from the MAT—reading and mathematics.

RESULTS

Before proceeding to the assessment of the relations between the BORS and SCT measures on child adjustment outcomes, a number of preliminary analyses were accomplished to provide descriptive information and construct validation for each of these two measures

BORS Preliminary Analyses

One primary and one secondary rater were trained using the BORS manual and practice protocols as well as protocols derived from pilot subjects. The primary rater, blind to other subject scores, rated the BORS for all subjects in the current study. Both raters scored a subset ($N = 20$) of the protocols to examine interrater reliability. For the parent nurturance variable (described below), the Pearson product moment correlation between the two raters was .81, $p < .001$. Item level ratings evidenced comparable reliability to those reported in the BORS manual.

In the present study the BORS was used for the first time with 9- to 12-year-old children. In order to test the generalizability of the scale structure, a nonorthogonal (promax) factor analysis was obtained on the combined parent ratings derived from the present sample. Results are presented in Table 1. These findings are comparable to Blatt et al. (1981), revealing three conceptually similar factors. The first factor, with an eigenvalue of 6.61, accounted for the majority of variance. The second and third factors had eigenvalues of 1.71 and 1.25, respectively. To check further the validity of the factor pattern, promax rotations were performed on mother and father ratings separately. Similar factor analytic results emerged. Because this investigation focuses primarily on the general quality of object representation in parent relations, and because of the large scree test (Cattell, 1966) differences between Factors 1 and 2, an average of the 10 ratings loading most highly on Factor 1 listed in Table 1 was labeled the Blatt Parent Nurturance score (BPN) and served as the primary variable of interest. This variable reflects the affective quality of the parent description as well as the dimension of healthy involvement and nurturant support. When maternal or paternal items on the Factor 1 scale were considered separately, they were labeled Blatt Mother Nurturance (BMN) and Blatt Father Nurturance (BFN), respectively. In addition, the conceptual level and length of description scores will be employed as measures of secondary interest.

Table 1
Factor Loadings From Promax Rotation Analysis of the Blatt Object
Representation Item Ratings for Mothers and Fathers Combined

<i>Item</i>	Factor 1	Factor 2	Factor 3
Affectionate			
Ambitious-driving			80
Malevolent-benevolent	89		
Cold-warm	80		
Constructive involvement	82		
Intellectual			67
Judgmental	- 54		47
Negative-positive ideal	91		
Nurturant	88		
Punitive	- 76		
Successful	76		
Weak-strong	66		
Ambivalence	- 78		
Conceptual level		73	
Length of description		66	

Note $N = 92$ Only factor loadings with a magnitude greater than .40 are indicated

Analyses of variance (ANOVAs) were performed in order to test for sex and grade effects on the BPN, BMN, and BFN variables. There were no main effects for either sex or grade on any of these variables. A Sex \times Grade interaction did, however, emerge for the BPN rating, $F(2, 90) = 3.19, p < .05$. Inspection of the means revealed that the interaction was due primarily to gender differences within the sixth-grade group, such that sixth-grade boys rated their parents less positively on the BPN than sixth-grade girls. No interaction was obtained for the BMN or BFN scores when separately assessed. Accordingly, subsequent analyses are collapsed across grade and sex unless otherwise indicated.

In order to assess the construct validity of the BORS measure within this age group, relations between the father, mother, and combined parent nurturance scores and an additional measure of parent perceptions (using the POS) were examined. These correlations are presented in Table 2. Results provide moderate support for the construct validity of the BORS nurturance factors using this highly diverse method.

Table 2

Correlations Between Father (BFN), Mother (BMN), and Combined Parent (BPN) Object Relations Scores and Dimensions From the Parent Orientation Scale

	Father auto- support	Father involvement	Mother auto- support	Mother involvement	Parent auto- support	Parent involvement
BFN	17	40**	04	22*	10	38**
BMN	19 [†]	15	27**	24*	29**	23*
BPN	22*	36**	17	28**	23*	37**

Note BFN = Blatt Father Nurturance, BMN = Blatt Mother Nurturance, BPN = Blatt Parent Nurturance

* $p < .05$, two-tailed

** $p < .01$, two-tailed

[†] $p < .10$, two-tailed

SCT Preliminary Analyses

Two independent raters, trained according to the self-training manual, were used to establish reliability for the SCT measure of ego development. Interrater reliability was assessed by comparing item ratings and total protocol ratings (TPR) of these two independent raters on 40 protocols. Item rating reliabilities averaged .92 and TPR reliability calculated for exact agreement was .83 for the 40 protocols. These results suggest substantial interrater reliability. One of these two raters, who had previously been trained on the self-training manual and had established reliability of greater than .9 with protocols scored by raters trained at Washington University, scored the remaining protocols. The TPR scores from this rater, derived using the SCT's "automatic ogive rules," were used for all subsequent analyses.

A 2×3 ANOVA was accomplished on TPR scores in order to assess effects for sex, grade, or their interaction. No significant results emerged. Previous validity studies have shown correlations between ego development and age. However, within this sample, age was uncorrelated with the TPR ($r = .06$, *ns*), undoubtedly due to the constrained age range intentionally employed. Subsequent analyses collapse across grade and sex unless otherwise indicated.

The current sample represents the youngest group to which the SCT method has been applied. This application was facilitated by the verba-

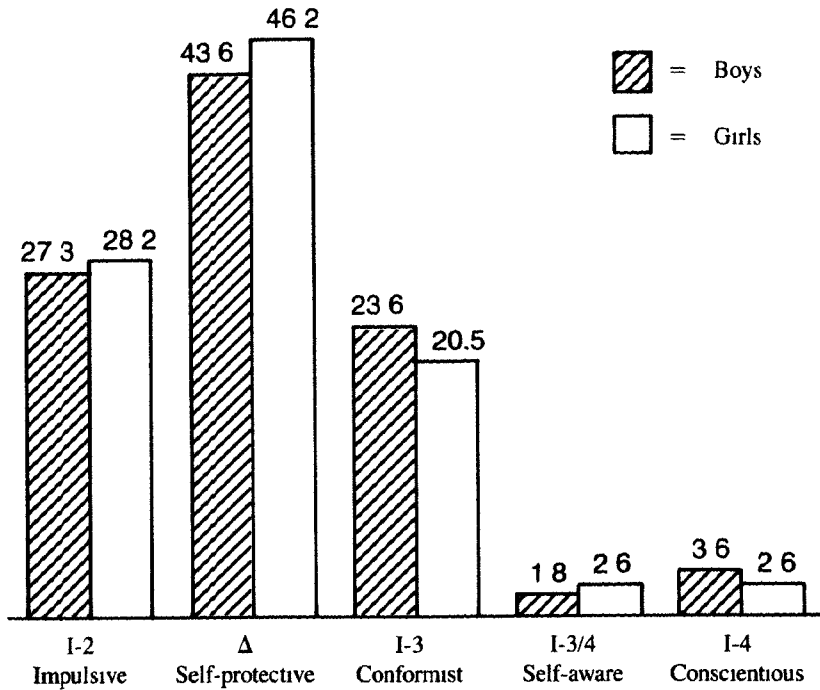


Figure 1

Percentage of Boys and Girls Representing Various Stages of Ego Development Based on Total Protocol Ratings

tim recording method. However, because of this modification it is of interest to examine the stages of ego development represented within this group, both for descriptive purposes and to assess the match with theoretically derived expectations. Figure 1 presents the percentage of males and females represented at the various stages of ego development based on the TPR. The modal level of these children is "self-protective," characterized by the ability to anticipate immediate consequences of behavior and the emergence of self-control over impulses and understanding of rules versus dependence on direct external constraint. Ego development in large part varied from impulsive (I-2) to conformist (I-3) levels with only a few subjects receiving higher stage scores. These ratings generally conform to developmental expectations for this middle childhood period, and provide support for the use of the SCT model in this age range.

Relations Between Ego Development and Object Relations

Before assessing the association between the object relations and ego development variables and the varied adjustment and self-evaluative outcomes, the correlations between these "independent" variables were assessed. The BPN and TPR were not significantly correlated ($r = .10$, *ns*). Correlations were also examined between the BORS conceptual level and length of description. The latter two variables were both significantly related to the TPR, $r = .21$, $p < .05$, and $r = .28$, $p < .01$, respectively. These results suggest that the TPR is related to complexity and elaboration in the BORS protocols but not to the content or valence per se, a finding that is congruent with the current hypotheses.

Relations of Ego Development and Object Relations to Child Outcomes

As previously discussed, child outcomes were assessed through multiple methods including self-ratings, teacher ratings, peer sociometric ratings, and indices of actual achievement. For purposes of presentation these various outcomes will be discussed by category. In each case, the results reflect the simultaneous regression of the dependent measure onto the BPN, TPR, and $BPN \times TPR$ variables (Table 3). In addition, correlational results are also presented (Table 4).

Teacher ratings As shown in Table 3, teacher ratings of social adjustment were unrelated to either variable or their interaction. However, teacher-rated academic competence was significantly related to ego development. Higher TPR's were associated with higher teacher-rated academic competence. A significant interaction was also evidenced for the teacher rating of academic competence. Inspection of this interaction revealed that children with high TPR and low BPN scores tended to be rated as most academically competent, while the lowest ratings were obtained for children low on both variables.

Self-ratings Table 3 reports relations between child self-evaluations and the object relations and ego development variables. The majority of significant relations appeared between these ratings and the object relations measures. Children with higher BPN scores rated themselves as more socially competent, more cognitively competent, and as better adjusted.

Simultaneous Regression of Child Outcome Measures Onto Blatt Parent Nurture Scores (BPN) and Total Protocol Ratings (TPR) From the Sentence Completion Test

	BPN		TPR		BPN × TPR		R ²
	F	Beta	F	Beta	F	Beta	
<i>Teacher ratings</i>							
TRS social adjustment	28	33	13	04	1 08	- 15	02
TRS academic competence	23	79	7 26**	29	4 76*	- 38	12
<i>Self-ratings</i>							
General perceived competence	3 64†	49	22	04	1 92	- 17	06
Social perceived competence	5 33*	43	5 76*	- 15	88	- 11	12
Behavioral perceived competence	2 38	- 01	01	- 01	33	07	03
Cognitive perceived competence	4 16*	12	58	05	02	14	05
CRS general adjustment	8 07**	3 15	1 02	- 55	29	- 57	10
<i>Peer ratings</i>							
Sociometric mean	4 56*	- 34	00	- 01	92	10	06
<i>Achievement</i>							
Reading %	64	10 64	9 47**	6 62	1 66	- 4 74	12
Math %	07	3 15	3 09†	3 75	33	- 2 13	04

*p < .05, two-tailed

**p < .01, two-tailed

† p < .10, two-tailed

Table 4
Correlations Between Child Outcomes and Blatt Parent Nurturance and Total Protocol Ratings

	Blatt Parent Nurturance	Total protocol rating
<i>Teacher ratings</i>		
TRS social adjustment	06	01
TRS academic competence	05	26*
<i>Self-ratings</i>		
General perceived competence	20 [†]	07
Social perceived competence	23*	- 22*
Behavioral perceived competence	16	- 01
Cognitive perceived competence	21*	11
CRS general adjustment	29**	03
<i>Peer ratings</i>		
Sociometric mean	- 22*	01
<i>Achievement</i>		
Reading %	08	33**
Math %	- 03	19 [†]

* $p < .05$, two-tailed

** $p < .01$, two-tailed

[†] $p < .10$, two-tailed

generally. Children with higher BPN scores were also marginally higher in general self-worth ($p < .06$). Ego development was, by contrast, negatively related to perceived social competence but unrelated to the remaining variables. No BPN \times TPR interactions were obtained for self-ratings.

Peer ratings. The Gesten Class Wheel is a sociometric rating in which higher scores represent less popular children. The BPN was significantly related to this variable. Children with better parent relations scores were rated by their peers as more popular than those with lower scores. Neither the TPR nor the BPN \times TPR interaction was significantly associated with the sociometric rating.

Achievement. Metropolitan Achievement Test percentile ranks for both reading and math were assessed in relation to the independent variables.

Results revealed a significant effect for the TPR on reading achievement. A marginal relation was also evidenced between TPR and math achievement. No other effects for achievement were revealed.

Relations Among Dependent Measures

Table 5 presents the correlations among the various dependent measures used in this study. Expectably high correlations within methods are in evidence, e.g., intercorrelations of perceived competence subscales, or of teacher ratings. Of substantive interest are cross-method, cross-construct correlations. For instance, these results suggest that peer popularity is significantly related to teacher ratings of social adjustment and school competence but not to the child's own perceived competence. However, less popular children do rate themselves as having more adjustment problems, and they have lower achievement. The absence of relations between general perceived competence (self-worth) and the sociometric rating is particularly striking. At least within this sample, self-worth is more highly associated with the teacher's view of the child than that of peers. Of additional interest is the child self-rating of adjustment, which is related to a broad array of outcomes including both achievement and popularity.

DISCUSSION

Object relations theorists argue that the quality of relations with significant caretakers plays a crucial role in personality development and structuralization. Ego psychology by contrast stresses the active elaboration and integration of psychological function and structure in the course of adaptation. Obviously both of these general perspectives can lay claim to illuminating important aspects of developmental progression. In the present study we examined measures derived from two specific approaches to object relations and ego development. Our intent was to assess those outcomes in middle childhood with which each is associated. The pattern of results attests to the differential predictiveness of each measure, with virtually no overlap. These differential patterns as well as the methodological limitations of this investigation merit discussion.

Loevinger's SCT was employed as a measure of ego development. To date this is the youngest group to which the SCT has been applied. Use

Table 5
Correlations Between Teacher, Self, Peer, and Achievement Ratings for All Subjects

	Soc TR	Acad TR	Gen PC	Soc PC	Behav PC	Cog PC	CRS Adj	Soc Mean	Reading %
<i>Teacher ratings</i>									
Social competence	—								
Academic competence	59**	—							
<i>Self-ratings</i>									
Gen perceived competence	22*	33**	—						
Soc perceived competence	02	- 03	49**	—					
Behav perceived competence	15	32**	41**	06	—				
Cog perceived competence	23*	32**	40**	29**	27**	—			
CRS general adjustment	29*	22*	61**	36**	33**	36**	—		
<i>Peer ratings</i>									
Sociometric Mean	- 42**	- 32**	- 07	- 12	- 09	01	- 30**	—	
<i>Achievement</i>									
Reading %	28**	63**	21 [†]	- 04	18 [†]	29**	11	- 29**	—
Math %	42**	57**	19 [†]	- 18 [†]	24*	37**	24*	- 35**	50**

Note. N = 92

*p < .05, two-tailed

**p < .01, two-tailed

[†]p < .10, t, o-tailed

of the SCT with this age group was facilitated by a verbatim recording method, versus the traditional written protocol. Results suggest that the modification was appropriate. The modal level and range of ego development stages found in this population are consistent with what would be theoretically predicted. Most of the children studied were at Loevinger's "impulsive" or "self-protective" stages, characterized by low levels of internalized control, dependence, and conceptual simplicity. These are the lower stages of ego development that are typically identified using paper and pencil methods. Just over 20% of the population was at the "conformist" level, wherein social controls are internalized because they are group-accepted rules and there are increasing concerns with acceptance and appearance. There were remarkably similar profiles for boys and girls in terms of proportions at any given stage of ego development.

Level of ego development, as estimated using the TPR score, was predictive of cognitive but not social or self-evaluative outcomes in this sample. The TPR was significantly predictive of both teacher-rated competence and actual reading achievement. Previous studies have also shown relations between ego development levels and IQ, verbal fluency, and achievement (see Hauser, 1976) as evidence of the fact that ego development reflects cognitive complexity. Unpredicted was the negative relation between the TPR and perceived social competence. Nonetheless one possible explanation is that children at the higher levels of ego development for this sample, i.e., those from I-3 to I-4, may be more self-aware and evaluative with respect to themselves as social objects, thus resulting in a modest negative correlation.

It is important to note that Loevinger and her colleagues have argued that the validity and meaning of the SCT are not optimally gauged by correlational studies. The issue is not one of variance, for clearly there is enough variance even in this young population to predict variables such as achievement and teacher ratings. Rather the concept of stages is such that the patterns of association among traits within stages vary—i.e., how psychological structures function and are organized. The current data base is insufficient to test this hypothesis. Secondly, since ego development is a "deep structure" (Loevinger & Knoll, 1983), it is not always directly related to overt behavior. Thus the absence of relations with self and peer ratings may come as no surprise to some investigators.

Nurturance ratings from the BORS were used to assess the quality of the child's representation of parental figures. In contrast to the SCT, the nurturance scores were unrelated to cognitive outcomes, but were asso-

ciated with a variety of self and peer evaluations. Children with higher scores on the BORS parent nurturance factor perceived themselves as more socially and cognitively competent. They also reported marginally higher self-worth and significantly higher general adjustment. Furthermore, children with more positive parent representations were more popular among their peers. These results suggest that the quality of the parent-child relationship, at least as it is represented by the child, is associated with more positive self-feelings, more confidence, and more sense of adjustment. It is also possible that the quality of parent-child interaction facilitates more positive interactions between the child and peers as reflected in the sociometric finding. This particular relation bears further examination, but is consistent with the view that object representations are related to actual interpersonal functioning.

The BORS scores for conceptual level and verbal fluency were significantly and positively related to ego development (TPR) scores, while parental nurturance ratings were unrelated to the TPR. This again suggests that Loevinger's ego development measure reflects cognitive complexity and is not as directly related to qualitative aspects of interpersonal relations.

Of general note is the low magnitude of the current results. For the SCT this may be in part due to the constrained developmental range assessed, as well as the methodological constraints posed by sample size. The results for both the BORS and SCT become more impressive when one considers that both are projective or "operant" (McClelland, 1980) measures and both were verbally administered, while neither of these characteristics were shared by the outcome measures. Thus method variance is not a factor in these results.

The present assessment of object relations and ego development in a middle childhood sample resulted in distinct and complementary relations with varied child outcomes. The object relations measure, based largely on qualitative ratings, was predictive of children's sense of self-worth, competence, and adjustment, and of peer evaluations of likability. By contrast the SCT, which is based on structural scoring criteria, provided a more general description of developmental stage and showed some positive correlations with cognitive outcomes in the academic domain. The absence of predictive overlap and of statistical interaction is on the surface consistent with the claims of some theorists, such as Greenberg and Mitchell (1983), who argue that these frameworks are of quite different focus. This claim needs to be tempered by awareness of

the methodological constraints involved in each assessment and the fact that neither the SCT nor the BORS fully reflects the traditions of ego development or object relations, respectively. More generally the findings point to the importance of both lines of inquiry for the study of developmental processes and childhood adaptation.

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