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Social Goals: Relationship to Adolescent Adjustment and to Social Problem Solving

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Examined the relations between adolescent boys' social goals of dominance, revenge, avoidance, and affiliation and (1) self-reported negative adolescent outcomes; (2) subjective sense of self-esteem; and (3) externalizing, internalizing, and prosocial behaviors, as rated by peers and teachers. Results indicated that social goal values were related to diverse aspects of self-, teacher-, and peer-reported social and behavioral functioning, with a consistent association found between a range of delinquent, substance-using, and behavioral difficulties, and endorsement of high goal values for dominance and revenge and low goal values for affiliation. Results also indicated that teacher-identified aggressive boys differed from nonaggressive boys in the value they placed on social goals, with aggressive boys placing a higher value on goals of dominance and revenge, and lower value on goals for affiliation. Finally social goal choice had a clear relation to the social problem-solving differences of aggressive and nonaggressive boys.

Recent research from a social learning theory perspective (SLT) has begun to investigate cognitive moderator variables which may affect the information processing of aggressive children (e.g., Lochman, White, & Wayland, 1991). Among other factors, these models suggest that general and situational cognitive schemas (or schematic propositions) influence attributional and problem-solving processes which have been found to be distorted and deficient among aggressive children (e.g., Asarnow & Callan, 1985; Deluty, 1985; Dodge, Pettit, McClaskey, & Brown, 1986; Lochman & Lampron, 1986;

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Rabiner, Lenhart, & Lochman, 1990). The SLT framework proposes that behaviors are the result of individual's expectations that the behaviors will lead to valued outcomes or goals (e.g., Rotter, Chance & Phares, 1972). Thus, social goals are conceptualized as one form of a cognitive construct which determines interpersonal behaviors (e.g., Schmidt, Ollendick, & Stanowicz, 1988).

Rubin and Krasnor (1986) have defined a goal as "the representation of the end state of the problem solving process," implying that one's goals may be an important factor in the choice of social problem-solving strategies employed. Goals may thus reflect motivational aspects of children's social cognition and social behavior (Mischel, 1990; Parkhurst & Asher, 1985; Smith & Lazarus, 1990). Recently, Dodge, Asher, and Parkhurst (1989) have proposed that differences between socially competent and socially incompetent children may be due not only to single prosocial goals they lack or antisocial goals they possess, but also to how the children manage goal conflicts and coordination of multiple goals. To date, this issue has not been empirically investigated. Although there has been some debate as to whether it is actually possible to "separate out" a goal from the behavioral enactment to achieve its end (Dodge, 1986), Parkhurst and Asher (1985) have argued that equating a social goal with a behavior enactment or its consequences is problematic. The outcome of an interaction may not represent the intention or chosen goal when a particular behavior sequence is initiated. At this juncture, it appears important to evaluate whether knowledge of social goals sheds any light on the prioritization and/or execution of social problem-solving strategies in aggressive children and adolescents. Thus, a child could be effective at achieving certain goals but be socially deviant because the goals are deviant (Dodge et al., 1989).

Previous research on the role of social goals in children's functioning has documented differences in goal selection patterns according to group differences such as sociometric status, behavioral characteristics (e.g., aggressive vs. nonaggressive), and grade level. For example, with a group of white, middle-class third to fifth graders, Renshaw and Asher (1983) found that unpopular children rank-ordered positive–outgoing goals lower than did popular children when presented with hypothetical situations of four types (i.e., making contact, entry, friendships, conflict). However, these group differences emerged only in response to conflict situations. In a more recent study by Crick and Ladd (1990), socially rejected third to fifth graders were found to focus more on instrumental outcomes and less on relational outcomes in peer conflict vignettes than did nonrejected children.

Social goals have been found to relate to children's maladaptive behavior, as well as to their sociometric status. In a study of third-to-sixth grade children, Boldizar, Perry, and Perry (1989) found that peer-identified aggressive children placed greater value on having control of victims, and

were concerned less about victim suffering, victim retaliation, peer rejection, and negative self-evaluations than were nonaggressive children. Ollendick and Schmidt (1987) found that the negative peer interaction behavior of second- to third-grade students in a classroom setting was predicted by the degree to which they valued interacting with peers.

Recently, Rabiner and Gordon (1991) investigated fourth- and fifth-grade children identified on dimensions of both sociometric and behavioral status. In response to vignettes about cooperative and competitive peer interactions, aggressive–rejected boys tended to express few goals indicating concern for peers' feelings and produced more self-focussed solutions than did nonrejected children. Slaby and Guerra (1988) examined self-reported goals and solutions with comparisons among nonaggressive and aggressive high school students and incarcerated antisocial adolescents, and found that aggressive subjects were more likely than nonaggressive adolescents to endorse social goals that were hostile in nature and to suggest solutions rated as ineffective. Similar to the findings by Boldizar et al. (1989), these adolescents were very concerned about appearing dominant in the hypothetical situation. However, the assessment of goals was limited to a forced choice between hostile and nonhostile motivation.

Together, these studies suggest that older, more popular children with few behavior problems evidence more adaptive, prosocial goals (e.g., Renshaw & Asher, 1983). In contrast, children's aggressive interpersonal behavior is related to social goals which place a high value on control and hostility and a low value on peer interactions and peer feelings.

The current study will extend these studies of social goals in two ways. First, knowledge of the correlates of children's social goals will be extended by examining how patterns of social goals relate to (a) serious negative adolescent outcomes involving delinquency and substance use, (b) a range of externalizing, internalizing, and prosocial behaviors as rated by multiple sources (peer and teachers), and (c) adolescents' subjective sense of self-esteem. Second, this study will evaluate how the value of social goals differ between teacher-identified aggressive and nonaggressive adolescents, and how the social goals relate in turn to the content of adolescent's social problem-solving strategies.

METHOD

Subjects

The subjects for this study were 92 boys who were part of a larger longitudinal assessment of intervention effects. Those aggressive boys who

had received the cognitive–behavioral intervention were not included in this longitudinal study, since their adolescent outcomes were altered in part by the intervention (Lochman, 1992). The followup sample for this longitudinal study thus consisted of boys who had originally been assigned to the untreated aggressive and the nonaggressive conditions. At the time of the followup (4 years after the initial Time 1 assessment), the average age of the boys was 15 years. Twenty-six percent of the followup sample were African Americans, while the race of the remainder of the sample was white. The average verbal IQ of the sample was 102 (SD =18) derived from the school administered Cognitive Abilities Test (Thorndike & Hagen, 1982).

The 92 subjects examined in this study came from a pool of 273 boys who had been identified as potential subjects for the untreated aggressive and nonaggressive conditions in the longitudinal intervention study. We were unable to recontact or complete structured interviews with 86 boys (32%) from this pool. The principal reasons for the inability to recontact potential subjects were families moving from the school system, difficulty making contact with subjects who did not have telephones, and students moving from schools after data collection had begun but before they had received the structured interview. Of the remaining 187 potential subjects, parental consent was obtained for 61% of the boys. Teacher ratings were obtained on 92 of these boys, which then served as the sample for this study.

Since the followup assessment took place with a portion of the total pool of potential subjects (N = 273), the comparability of the followup sample and the nonfollowup portions of the subject pool was determined. The boys with consent were compared to the other two groups (loss of contact, nonconsent) on their earlier Time 1 (elementary school) scores for peer sociometric nominations for aggression and peer social acceptance ratings from their classmates. At the initial assessment, children nominated the three children in their classrooms who fought the most and then rated all the pupils in the classroom on a 1–5 rating scale, with 1 indicating *my very best friends* and 5 indicating *dislike them*. The latter sociometric scale, the Ohio Social Acceptance Scale for the Intermediate Grades (OSAS), has displayed adequate reliability and validity in prior research (Lochman & Lampron, 1985). Sociometric ratings were analyzed within gender on the 624 boys who received the peer ratings. Each boy received an average aggression nomination score, indicating the percentage of their same-sex classmates who nominated that child as aggressive, and a mean social acceptance rating score. Of the 136 potential subjects who had been identified as untreated aggressive boys at the initial stage of the longitudinal study, the followup boys had an average aggression nomination ratio of .38 and a social acceptance score of 2.6, while the nonfollowup boys had an average

aggression nomination ratio of .42 and a social acceptance score of 2.6. Of the 137 potential subjects who had been identified as nonaggressive at the initial longitudinal assessment, the followup boys had an average aggression nomination score of .01 and a social acceptance score of 2.2, while the nonfollowup boys in this pool had an average aggression nomination score of .01 and a social acceptance score of 2.3. Thus, the boys examined in this followup study were representative of the total pool of potential subjects in their degree of aggressiveness and peer social acceptance.

Since the second purpose of this study was to compare goals and problem solutions of high-aggressive and low-aggressive boys, aggression status was determined by teacher ratings on the Aggression subscale of the Missouri Children's Behavior Checklist (MCBC; Sines, Pauker, Sines, & Owen, 1969). Boys were classified as aggressive (AGG) ($n = 31$) if they received a raw score of at least 4 on this scale by their current teacher; this cutpoint has produced valid behavior differences between subject groups in prior research (e.g., Lochman, 1987). The nonaggressive boys (NON) ($n = 61$) had scores below this cutpoint. The aggressive boys' mean score of 7.5 ($SD = 2.6$) was significantly higher than the nonaggressive boys score ($M = 0.6$, $SD = 1.0$), $F(1, 90) = 341.3, p < .0001$. Eighty percent of the boys classified as aggressive at followup had also been classified as aggressive at the initial longitudinal assessment. Since 48% of the initially identified aggressive boys were still aggressive at the followup, it is apparent that not all aggressive elementary school children remained aggressive later, but of those adolescents rated as aggressive in adolescence, most had been aggressive in earlier years as well.

The validity of the status group assignment was established by comparing the two groups' classroom behavior. Classroom behavior was assessed with independent observers' ratings using the Behavior Observation Schedule for Pupils and Teachers (BOSPT; Breyer & Calchera, 1971). The BOSPT has a time-sampling format with recurring 10-sec intervals. The observer orients attention toward the child for 5 sec, observes the behavior occurring at the fifth second, and then classifies and records the response on the observation sheet for the next 5 sec. Off-task pupil behaviors were classified into two mutually exclusive codes: (1) passive off-task, indicating solitary inattentive behavior, and (2) disruptive–aggressive off-task, in which the child was interacting in an inappropriate and possibly aggressive manner. Each child was observed for two 30-min periods. To assess interrater reliability, two raters independently observed the same child at the same time for 16.7% of the observation periods, yielding kappa coefficients of .80 for passive off-task behavior and .83 for disruptive–aggressive off-task behavior. The aggressive boys displayed higher rates of both passive off-task behavior ($M = 18.6$, $SD = 13.4$), $F(1, 89) = 5.28, p = .02$, and disruptive–

aggressive off-task behavior (M = 6.9, SD = 6.3), $F(1, 89) = 6.86$, p = .01, than did the nonaggressive boys (passive off-task: M = 11.5, SD = 14.1; disruptive–aggressive off-task: M = 3.8, SD = 4.8).

To examine the demographic comparability of the status groups, the subject age, race, and IQ scores were examined. IQ was assessed with the Cognitive Abilities Test (Thorndike & Hagen, 1982), which yields a verbal IQ and a nonverbal IQ. ANOVAs indicated there were no differences between groups in age (AGG: M = 15.0, SD = 0.8; NON: M = 15.1, SD = 1.0), verbal IQ (AGG: M = 98, SD = 16; NON: M = 104, SD = 20), or nonverbal IQ (AGG: M = 1.02, SD = 18; NON: M = 104, SD = 17). The cells did differ in racial status, with the AGG cell having a higher proportion of African-American subjects (.39) than did the NON cell (.20), χ^2 (1, n = 92) = 3.84, p = .05.

Dependent Measures

Social Goal Measure. Subjects were individually administered the Social Goal Measure (SGM) by research assistants who were blind to their group status. The measure consisted of a hypothetical vignette about a peer conflict situation, followed by a series of questions about goals and problem solutions. The vignette involves an ambiguous peer provocation in which "a new kid at your school you don't know very well is coming down the hall from the other direction, and suddenly bumps into your shoulder hard, knocking your books to the floor."

To assess social goals, subjects indicated how important each of four goals would be to them in this situation by completing a 1 (*not important*) to 4 (*very important*) scale. The four goals were avoidance ("get away from the situation as soon as possible"), dominance ("let him know who's boss, in charge"), revenge ("get back at him"), and affiliation ("work things out and get to know him better"). These goals represented two conceptual dimensions (dominance vs. avoidance, revenge vs. affiliation) similar to the power and friendliness dimensions examined in Renshaw and Asher (1983). After assigning goal value ratings, subjects indicated which was their main goal in that situation.

Subjects then indicated what they would probably do to attain each of the four goals. The four categories of solutions were verbal assertion ("tell him to watch out where he's going"), verbal or physical aggression ("tell him he's a clumsy jerk who's taking up the whole hall, and that you feel like bashing him in the face," "hit him real hard"), bargaining ("tell him that if he won't bump into you again, you won't bump into him"), and other ("report the situation to a teacher or principal," "Ignore him and

keep walking to your class," "stare hard at him and go on"). The *other* category included solution types for help-seeking, nonconfrontation, and direct action.

Delinquency and Substance Use. During individual structured interviews with a research assistant, subjects responded to portions of the National Youth Survey questionnaire (NYS; Elliott, Huizinga, & Ageton, 1985). While self-report methods of assessing delinquency and substance use have potential disadvantages of concealment and forgetting, they have the advantage over official records of indicating undetected offenses and they are regarded as reasonably valid (Farrington, 1987). The NYS has displayed adequate test–retest reliability and criterion validity (Elliott & Huizinga, 1983; Elliott & Voss, 1974; Huizinga & Elliott, 1983). The two clusters of variables derived from the NYS addressed substance use (marijuana involvement, drug involvement, quantity–frequency index for alcohol, negative consequences of alcohol use) and delinquency outcomes during the past 12 months (crimes against person, general theft). The substance involvement scores were four point Guttman scales (e.g.: 1, *Never tried marijuana* to 4, *Use marijuana a couple of times a week or more when it's available*). The negative consequence of alcohol use was assessed by items that asked the number of times in the past year that alcohol produced problems with family, friends, physical fights, physical health, and arrests by police. The delinquency section consisted of 40 offenses representative of the full range of offenses in the Uniform Crime Reports. Each item was scored on a 9-point scale that went from zero to 2–3 times a day. Crimes against persons and general theft were summary scores for offenses in those areas.

Teachers' Behavior Ratings. Teachers completed the Missouri Children's Behavior Checklist (MCBC; Sines, Pauker, Sines, & Owen, 1969) on their students. The MCBC is a 76-item instrument with six subscales for Aggression, Inhibition, Activity Level, Somatization, Sociability, and Depression. Adequate odd–even reliability (Sines, 1986; Sines et al., 1969) and discriminant validity (Curry & Thompson, 1979; Lochman, 1987) have been reported for this measure.

Peer Sociometric Ratings. On a sheet indicating their classmates names, all students in a class rated their classmates on the 1–5 OSAS social acceptance rating (Allen, Chinsky, Larcen, Lochman, & Selinger, 1976). Students also nominated the three classmates they liked most and the three they disliked most (Coie, Dodge, & Coppotelli, 1982). Finally, students rated their classmates' behavior by nominating three children each who fought the most, who were sad, who were inattentive, who were shy, and who were leaders. These peer ratings were analyzed within gender, yielding

scores for social acceptance, liked most, disliked most, aggression, sadness, inattentive, shyness, and leadership.

Self-Esteem. The Coopersmith Self-Esteem Inventory (CSI; Coopersmith, 1967) is a 50-item self-report measure of subjects' self-esteem. Each item was answered with a forced choice of either "Like Me" or "Unlike Me." The CSI provided four subscales for General Self, Social (Peer) Self, Home Self, and School Self, as well as a Lie scale. There is evidence of good long-term reliability (Coopersmith, 1967) and discriminant validity (Allen et al., 1976; Lochman & Lampron, 1985, Lochman, Lampron, Burch, & Curry, 1985).

RESULTS

Relationships Between Social Goals and Adolescent Outcomes

A series of four canonical correlation analyses was performed to assess the relationship between social goal measures (dominance, revenge, withdrawal, and affiliation) and the four sets of outcome measure (self-reported delinquency and substance use, teacher-reported behavioral ratings, peer sociometric ratings, and self-esteem). Canonical correlation is a technique for analyzing the relationship between two sets of variables; analyses using it permitted the exploration of relationships between patterns of responses on the social goals measures and subscale response patterns for the four sets of outcome measures. Canonical correlation finds a linear combination from each variable set, called a canonical variate, such that the correlation between the two canonical variates in each analysis is maximized. The method of analysis was chosen over simple correlational analysis for two reasons. First, the limited number of canonical correlation analyses performed greatly reduced the probability of a Type 1 error in comparison to simple pairwise correlational analyses. Second, we felt that the relationships between the social goals variables (which produced a canonical variate for each of the analyses) and the outcome variables might be more complete than could be captured through simple correlational analyses. Table I presents standardized coefficients, correlations between subscale scores and their own respective canonical variates, and correlations between subscale scores and the other canonical variate. The latter correlations, indicating how variables related to the opposite variable set, are particularly useful when interpreting patterns in the relationship.

Delinquency and Substance Use and Subjects' Social Goals. This analysis consisted of a set of variables comprised of five subscale scores of the NYS (Crimes Against Persons, General Theft, Marijuana Involvement, Drug In-

Table I. Canonical Correlations of Self-Reported Delinquency and Substance Use and of Social Goals[a]

	Standardized coefficient	Correlation with canonical variate	Correlation with other variate
Outcome variables			
Crimes against persons	.86	.86	.47
General theft	−.30	.26	.14
Marijuana involvement	.73	.70	.38
Drug involvement	−.36	.46	.25
Alcohol involvement	−.01	.44	.24
Social goal variables			
Withdrawal	−.17	−.21	−.11
Dominance	.85	.97	.53
Revenge	−.02	.60	.33
Affiliation	−.22	−.71	−.39

[a]Canonical correlation = .55 (standard error = .07), $p = .003$; shared variance = 30.3%.

volvement, and Alcohol Involvement) and a set of variables comprised of subjects' scores for the four social goals. The correlation for the first set of canonical variates was significant. As with all four canonical correlations, correlations for subsequent pairs of canonical variates were not significant, indicating that the first canonical variate for each analysis represented the best fit. Results indicate that subjects who reported crime against persons and marijuana, drug, and alcohol involvement were likely to rate dominance and revenge high as social goals, and rated affiliation low.

Teacher Behavior Ratings and Subjects' Social Goals. For this analysis, the first set of variables consisted of the six subscale scores from the MCBC Teacher Rating Scale (Aggression, Inhibition, Activity Level, Somatization, Sociability, and Depression). Standardized coefficients and correlations between subscale scores and the first canonical variate are presented in Table II. Inspection of these results indicate that children who were rated by their teachers as high on depression and aggression, and low on sociability, rated social goals of revenge and dominance high and affiliation low.

Peer Sociometric Ratings and Subjects' Social Goals. For this analysis, the first set of variables consisted of the seven subscale scores from peer nomination procedures (liked most, liked least, saddest, shyest, good leader, most aggressive, least attentive). Standardized coefficients and correlations between subscale scores and the first canonical variate are presented in Table III. Examination of these results indicates that children who were rated by peers as inattentive and aggressive, who were disliked by peers, and who were not considered good leaders rated social goals of revenge and dominance high and affiliation low.

Subjects' Self-Esteem and Their Social Goals. This analysis consisted of a set of variables comprised of the five subscale scores of the CSI (Gen-

Table II. Canonical Correlations of Teacher Behavior Ratings and of Social Goals[a]

	Standardized coefficient	Correlation with canonical variate	Correlation with other variate
Outcome variables			
Aggression	.20	.48	.30
Inhibition	−.10	.28	.18
Activity level	−.03	−.13	.08
Somatization	−.39	−.24	−.15
Sociability	−.55	.50	−.31
Depression	.80	.71	.45
Social goal variables			
Withdrawal	−.19	−.24	−.15
Dominance	.28	.82	.52
Revenge	.56	.87	.55
Affiliation	−.33	−.72	−.45

[a]Canonical correlation = .63 (standard error = .06), p = .0002; shared variance = 39.6%.

Table III. Canonical Correlations of Peer Sociometric Ratings and of Social Goals[a]

	Standardized coefficient	Correlation with canonical variate	Correlation with other variate
Outcome variables			
Most aggressive	.11	.56	.31
Liked most	−.06	−.16	−.08
Liked least	.40	.53	−.08
Saddest	.27	.28	.15
Best leader	−.25	−.46	−.25
Shyest	−.41	−.08	−.04
Least attentive	.63	.78	.43
Social goal variables			
Withdrawal	.17	.19	.11
Dominance	.89	.98	.54
Revenge	.06	.64	.35
Affiliation	.09	−.61	−.37

[a]Canonical correlation = .55 (standard error = .08), p = .025; shared variance = 30.3%.

eral, Social, Home, Like, and School). Standardized coefficients and correlations between subscale scores and the first canonical variate are presented in Table IV. Results indicate that children with high social self-esteem, high Lie scale scores, and low self-esteem with respect to home and school rated affiliation low as a social goal and dominance high.[4]

[4]Since the self-esteem measure's Lie scale was found to be associated with the dominance pattern of social goals, it was possible that the canonical correlation results may have been affected by a social-desirability bias. To examine this possibility, the four canonical correlations were recomputed while partialing out the effect of the Lie scale score. The results from these adjusted analyses were quite similar for the first three analyses. The canonical

Table IV. Canonical Correlations of Self-Esteem and of Social Goals[a]

	Standardized coefficient	Correlation with canonical variate	Correlation with other variate
Outcome variables			
General	.49	.02	.01
Social	.40	.47	.23
Home	−.48	−.53	−.26
Lie	.58	.63	.31
School	−.41	−.47	−.23
Social goal variables			
Withdrawal	−.09	−.12	−.06
Dominance	.91	.92	.45
Revenge	−.34	.39	.19
Affiliation	−.37	−.76	−.37

[a]Canonical correlation = .49 (standard error = .08), p = .021; shared variance = 24.0%.

Relationships Between Social Goals, Aggression, and Problem Solutions

These analyses were conducted by first assessing aggression group differences on social goals. Next, we examined the relation between social problem solutions and the social goals.

Social Goals. A MANOVA tested the effects of the independent variables of group and race on the multivariate set of four social goals. Of the 31 aggressive subjects, 12 were African-American and 19 were Caucasian. Of the 61 nonaggressive subjects, 12 were African-American and 49 were Caucasian. Race was included as an independent variable here because the two group cells differed significantly on this variable. The main effect for group was significant, $F(4, 85) = 3.88$, $p = .006$, while the main effect for race, $F(4, 85) = 0.63$ and the Group × Race interaction effect, $F(4, 85) = 0.95$, were not significant. Since the race effect was not significant, race was not used as an independent variable or as a covariate in subsequent analyses for goals. Examining the multivariate group effect, univariate ANOVAs indicated the aggressive boys placed higher value on the dominance goal (AGG = 2.4, NON = 1.7), $F(1, 88) = 8.22$, $p = .005$, higher value on the revenge goal (AGG = 2.2, NON = 1.4), $F(1, 88) = 14.27$, p

correlations were .53 (standard error = .07, p = .006) for delinquency and substance use, .62 (standard error = .07, p = .0006) for teacher behavior ratings, and .56 (standard error = .08, p = .021) for peer sociometric ratings. For the fourth analysis, which involved the self-esteem variables with the Lie scale removed, the canonical correlation was .42 (standard error = .09, p = .138). While the self-esteem analyses results approximated the results reported in the text, the correlation was no longer statistically significant when the Lie scale scores were partialed out, indicating that a social desirability bias may have bad a weak effect on the self-esteem responses. However, overall the canonical correlations were little affected by the removal of the variance associated with the Lie scale.

= .001, and the lower value on the affiliation goal (AGG = 2.6, NON = 3.2), $F(1, 88) = 6.30$, $p = .014$, than did the nonaggressive boys. There was no group difference for the avoidance goal (AGG = 2.2, NON = 2.3).

Main Social Goals. This distribution of main social goals was significantly different between the two group cells χ^2 ($df = 3$) = 16.2, $p < .001$, with the aggressive boys having a higher rate of revenge main social goals (AGG: 26%, NON: 0%), lower rate of affiliation main social goals (AGG: 43%; NON: 75%), and slightly higher rate dominance main goals (AGG: 19%; NON: 13%).

Within-Group Analyses of Social Goals. To explore whether the two groups differed in their pattern of goal ratings, within-group analyses were conducted with paired *t*-tests. For the aggressive condition, there were no significant differences between any pairs of their social goal ratings, indicating that their ratings of four goal values were all within the same range. In contrast, for the nonaggressive boys, the affiliation social goal was rated significantly higher than the avoidance goal, $t(60) = 6.54$, $p = .001$, the avoidance goal was rated higher than the dominance goal, $t(60) = 2.03$, $p = .047$, and the dominance goal was rated higher than the revenge goals, $t(60) = 3.01$, $p = .004$. These results suggest a clear ordering of social goal ratings for nonaggressive boys.

Problem Solution Generated for Each Goal. Table V presents the percentages of problem solutions that were generated for each of the four goals. While different types of solutions were generated for the different goals, chi-square analyses indicated that there were no differences between the aggressive and nonaggressive boys for their solutions within each goal.

Problem Solutions for Main Social Goals. The aggressive and nonaggressive boys had significant differences on their solutions to attain their main social goals χ^2 ($df = 3$) = 10.62, $p < .01$. Aggressive boys had higher rates of verbal assertion (AGG: 39%; NON: 20%) and aggressive solutions

Table V. Percentage of Problem Solutions for Four Social Goals by Aggression Status[a]

	Avoidance		Dominance		Revenge		Affiliation	
Problem solution	A	N	A	N	A	N	A	N
Verbal assertion	37	27	23	17	10	7	20	15
Bargaining	3	12	3	12	3	3	50	57
Aggression	13	5	63	53	61	62	0	0
Other	47	57	10	18	26	28	30	28

[a]*Note*: A = aggressive; N = nonaggressive. Aggression includes physical aggression and verbal aggression codes. *Other* includes help-seeking, nonconfrontation, and direct action codes.

(AGG: 23%; NON: 8%), and lower rates of bargaining (AGG: 16%; NON: 48%), in comparison to nonaggressive boys. There were no group differences for the *other* category of solutions (AGG: 23%; NON: 25%). Since the group differences for problem solutions were only evident when the solutions to achieve the main social goals were examined, and not when the solutions to achieve each of the goals separately were examined, this analysis provided direct evidence of the effect of main social goals on the characteristic social problem-solving deficiencies of aggressive boys.

DISCUSSION

One purpose of this study was to identify correlates of social goals in a sample of adolescent males. The pattern of social goals associated with negative adolescent outcomes was relatively consistent across the four variable sets, and consisted of high values for dominance and revenge and low values for affiliation. Together these results indicate the strong, consistent association that exists between high values for dominance and revenge and low values for affiliation, and a wide range of delinquent, substance-using, and behavioral difficulties. Dominance proved to be the most sensitive correlate of outcome measures, while revenge emerged as a less consistent element of the goal pattern, especially in relation to self-esteem.

The dominance-oriented goal pattern was associated with (1) adolescent self-reports of crimes against persons and substance use, (2) higher levels of aggressive behavior according to teacher and peer ratings, (3) low levels of prosocial behavior, again according to teachers and peers, (4) more peer rejection, (5) peer-rated inattentive behavior, (6) teacher-rated depression, and (7) deficits in home-related and school-related self-esteem. Thus, adolescents who placed a higher value on dominance than affiliation had a variety of comorbid behavioral problems, including attentional difficulties and depression; these patterns of comorbidity are important characteristics for aggressive children (Campbell, 1990; Lochman & Wayland, 1991). Since these data were collected concurrently, it cannot be concluded that this goal pattern served a central role in the development and/or maintenance of the problem behavior. Future research can examine the temporal ordering of adolescents' social goals and their serious negative outcomes.

The findings related to the second purpose of this study indicate that teacher-identified aggressive adolescent boys differed from nonaggressive boys in social goals. Aggressive boys placed a higher value on social goals for dominance and for revenge in peer conflict and a lower value on social goals for affiliation than did nonaggressive boys. Motives to control others

and to get back at others' perceived provocations were particularly important for aggressive boys. It should be noted, however, that while aggressive boys did place a relatively higher value on dominance and revenge, they still placed substantial value on affiliating with peers. This "muddy" undifferentiated goal structure leads to the possibility of goal conflict for aggressive boys. Aggressive boys have to choose between, or integrate, relatively evenly valued goals and the behavioral strategies meant to attain these multiple goals. In contrast, nonaggressive boys have a relatively clear goal structure, and may therefore experience less internal conflict about the negotiation of social situations. Since the results of the current study are limited by the use of only one peer conflict vignette, limiting the generalizability of the findings to other situations, future research is needed to replicate and extend the study of social goals to other contexts. Other limitations of this study which can be addressed in future research include the need for objective measures of delinquency and substance use (in addition to self-reports) and for longitudinal assessments to determine if social goal patterns predate and contribute to behavioral difficulties.

One of the most significant aspects of the current findings involves the clear relation of social goal choice to the social problem-solving differences between aggressive and nonaggressive boys, suggesting an effect of cognitive schemas on information processing. When aggressive and nonaggressive boys endorsed solutions to attain each of the four social goals examined in this study, the pattern of solutions differed across the four goals but not between the two groups of adolescents. Aggressive and nonaggressive boys were in close agreement in their reports about what they could do to attain different goals. It was only when subjects' main goals were considered that significant differences emerged between aggressive and nonaggressive boys. Thus, the boys' selection of their primary social goals illuminated the differences in problem-solving styles which could be producing their maladaptive or adaptive behaviors. When only their main social goals were considered, nonaggressive boys endorsed more bargaining solutions and fewer aggressive and verbal assertion solutions to peer conflicts than did the aggressive boys. This pattern of problem-solving differences is consistent with Selman's model of interpersonal negotiation strategies (INS); (Selman, Beardslee, Schultz, Kruppa, & Podorefsky, 1986). In the INS model, bargaining represents a more developmentally advanced mutual-negotiation strategy than the unidirectional influence strategy of verbal assertion, which in turn is more advanced than aggressive and action-oriented solutions.

The current results have implication for interventions with aggressive children. Goals are assumed to be enduring characteristics of the individual which are not likely to be as accessible to simple, direct psychoeducational

interventions as isolated deficits in problem solutions. Hence, interventions may initially need to help children and adolescents find more adaptive strategies to accomplish their main social goals and rehearse strategies so those strategies can become more "automatic" aspects of their problem-solving styles (e.g., Lochman, Lampron, & Rabiner, 1989; Rabiner et al., 1990). Later, interventions could reinforce children's responses to their affiliation goals instead of their dominance or revenge goals, and to the value of deliberate problem solving in some situations. Ultimately, though seemingly less amenable to psychoeducational interventions, strategies to modify maladaptive cognitive schemas are indicated.

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