Journal of Consulting and Clinical Psychology
2001, Vol. 69, No. 3, 457–470

0022-006X/01/$5.00 DOI: 10.1037//0022-006X.69.3.457

A Contextual Analysis of Externalizing and Mixed Syndrome Boys: When Syndromal Similarity Obscures Functional Dissimilarity

Jack C. Wright
Brown University

Audrey L. Zakriski
Connecticut College

A contextualized approach to psychopathology that focuses on children's responses to events rather than overall behavior output was examined. Teachers rated boys in special education classrooms using a standardized syndromal instrument and one that assessed boys' social environments and their responses to them. Externalizing and mixed (aggressive and withdrawn) syndrome groups showed distinctive response patterns that could not be derived from syndrome scores, with externalizers showing aggression in response to aversive events, and mixed boys showing contextually anomalous responses to positive events. The externalizing and mixed groups each consisted of functionally distinct subgroups that were not detected using syndrome measures. The results clarify how syndromal measures can confuse psychologically distinct children and demonstrate the utility of a teacher-report method that is efficient to administer and sensitive to contextual influences.

Over a half century ago, Lewin (1935) suggested that behavior and development should be understood in terms of mutually dependent, dynamic interactions between the person and the environment. Though influential in guiding research on child behavior and group dynamics, Lewin's field theory had less influence on the practice of assessing childhood psychopathology. Instead of describing dynamic person–environment interactions that give rise to behavior, many "syndromal" instruments focus on summarizing individuals' overall behavioral output, operationalized as average ratings over sets of covarying behavior statements (see Barrios, 1988; Block, 1995; Scotti, Morris, McNeil, & Hawkins, 1996). The present research examines the view that what is crucial to understanding childhood psychopathology is not simply children's overall behavior output but the constellations of person and environment variables that yield that output. Rather than removing contextual factors, this approach suggests that children's behavioral output should be interpreted in light of the situations they encounter, how they respond to them, and what the patterning of their responses may reveal about their social competencies, social information processing, and learning histories.

Lewin's (1935, 1954) analysis of behavior as a joint function of the person and the environment converges with more contemporary approaches that emphasize contextual influences, including cognitive social learning theory (Bandura, 1986), transactional models of development (Sameroff, 1995), social interaction models of aggression (Patterson, 1997), and functional approaches to behavioral assessment (Haynes & O'Brien, 1990; Scotti et al., 1996). A shared implication of these perspectives is that context-free trait measures can obscure the processes that mediate behavior. First, individuals with similar overall output can differ both in their person variables (e.g., how they respond to events they encounter) and in their social environments (e.g., how often they encounter those events). Gresham and Noell (1993) gave the example of two children whose behavior was topographically similar (i.e., both had frequent aggressive outbursts), and who received similar *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV;* American Psychiatric Association, 1994) diagnoses, but who differed in the conditions that elicited their aggression (e.g., to gain attention vs. to avoid difficult tasks). Wright, Lindgren, and Zakriski (2001) contrasted the child who is rarely teased but likely to react aggressively when this does occur with another who is frequently teased but unlikely to react aggressively in that context. Despite their fundamental differences in how often they encounter certain events and how they respond to them, the two children would have similar overall rates of aggression.

A second problem is that individuals who differ in their overall output may be psychologically similar and react similarly to events that they encounter. For example, consider two children who are equally likely to become aggressive when teased by peers but who differ in their social environments: One child lives in a hostile peer environment and often encounters peer victimization, whereas the other lives in a benign environment where such treatment rarely occurs. Although environmental factors alone could account for differences in the overall frequency of their aggression, context-free trait measures could mistakenly imply that a stronger "trait" exists in the child with the higher frequency of aggressive behavior. These examples illustrate how topographical behavior sum-

We thank the students, teachers, and school administrators whose cooperation and support made it possible to collect the data reported here. We are especially grateful to Harry Parad, Clinical Director of Wediko Children's Services, Boston, for his continuing support, and to Kristen Lindgren for her assistance with data collection.

Correspondence concerning this article should be addressed to Jack C. Wright, Department of Psychology, Brown University, 89 Waterman Street, Providence, Rhode Island 02912, or to Audrey L. Zakriski, Department of Psychology, Connecticut College, 270 Mohegan Avenue, New London, Connecticut 06320. Electronic mail may be sent to Jack_Wright@brown.edu or to alzak@conncoll.edu.

maries can divert attention from contextual influences, reinforce the view that syndromes exist "in the child" rather than in the environment, and interfere with a more process-oriented understanding that is needed for clinical intervention (Eifert, Evans, & McKendrick, 1990; Haynes & Uchigakiuchi, 1993; Koerner, Kohlenberg, & Parker, 1996; Scotti et al., 1996; Stoolmiller, Patterson, & Snyder, 1997).

Although recent critiques have raised these concerns about *DSM–IV* (Koerner et al., 1996; Scotti et al., 1996), Smith and Iwata (1997) noted that the influence of antecedent events on behavior disorders has received relatively little attention in the field of applied behavior analysis, where consequent determinants of behavior have been studied more extensively. Likewise, extensive research that uses standardized "behavior checklists" to study childhood psychopathology (see Barkley, 1988, for a review) provides relatively little information about person–environment interactions that may underlie children's problem behaviors. The literature on two of the most thoroughly developed and most widely used instruments—the Teacher Report Form (TRF) and the related Child Behavior Checklist (CBCL; Achenbach, 1978, 1993; Edelbrock & Achenbach, 1984)—illustrates this. Numerous studies have examined the reliability of these measures (see Achenbach, 1982). Other studies have examined the prevalence of syndrome groups (internalizing, externalizing, comorbid) that are defined using the TRF-CBCL internalizing and externalizing scales, two broad measures of aggression/delinquency and withdrawal/social anxiety (McConaughy & Achenbach, 1994; McConaughy & Skiba, 1993). Many other studies comparing syndrome scores at home (using the CBCL) versus school (using the TRF) provide evidence that "cross-informant" correlations are low (e.g., McConaughy, Achenbach, & Gent, 1988). These types of studies provide important information about child psychopathology and the factors that contribute to cross-informant disagreement (e.g., rater bias), but they do not answer questions raised earlier about the contextual origins of behavior. For example, low cross-informant syndrome correlations alone do not reveal whether children's variable behavior stems from differences in the social stimuli they encounter at home versus school, differences in how they respond to similar stimuli that occur in the two settings, or some combination of the two.

Recent research illustrates how the analysis of situation–behavior profiles can deepen our understanding of childhood psychopathology. Wright, Zakriski, and Drinkwater (1999) found that externalizing (aggressive but not withdrawn) boys showed elevated aggression only in response to aversive peer events, and internalizing (withdrawn but not aggressive) boys showed elevated withdrawal only in response to aversive peer or adult events. *Mixed* (aggressive and withdrawn) boys showed a pattern that was neither an average nor a mixture of the patterns for their pure counterparts: These boys showed elevated aggression and withdrawal when talked to by peers, a context in which other groups showed neither response. Likewise, the social environments of mixed boys (i.e., defined in terms of how often they encountered different situations) were not the aggregate of the results for externalizing and internalizing boys. Thus, syndromal groups did not differ simply in their overall rates of aggression or withdrawal but in the contextual origins of those behaviors. The distinctive responses of mixed children are notable in light of findings that children who are both aggressive and withdrawn are at greater risk for maladjustment, peer rejection, and victimization (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1996; Koot & Verhulst, 1992; Ladd & Burgess, 1999; Ledingham & Schwartzman, 1984; Lyons, Serbin, & Marchessault, 1988).

The contextualized analysis of childhood psychopathology is currently hampered by the lack of efficient methods for investigating children's characteristic responses to social stimuli. Case-specific or "idiographic" analyses can provide rich information about contextual influences, but these methods are often idiosyncratic and difficult to compare over investigators (Scotti et al., 1996). One route toward more efficient contextualized analysis would be to rely on adult respondents for information, but this raises a critical question we examine in the present research: Can adults provide useful information about children's social environments and how they respond to them when they are asked to make summary retrospective judgments as occurs on most standardized checklists? Of course, syndromal instruments such as the TRF rely on adults' retrospective judgments (e.g., over the past 2 months), but these checklists do not ask respondents to assess children's environments or their responses to them. Other measures assess how children respond to social situations (Barkley & Edelbrock, 1987; Dodge, McClaskey, & Feldman, 1985), but these measures do not simultaneously evaluate how often children encounter different situations and how they respond to those situations when they are encountered, both of which contribute to overall behavioral output. Wright et al.'s (1999) study involved numerous hourly observations generated by many observers for each child, and so their findings do not demonstrate that any given adult respondent had explicit knowledge of contextual influences.

Previous research on people's judgment shortcomings suggests that people underestimate situational influences (Alicke, Zerbst, & LoSchiavo, 1996; Ross & Nisbett, 1991), exaggerate the likelihood that similar traits or behaviors will co-occur (Dawes, Mirels, Gold, & Donahue, 1993), and perceive "illusory" correlations in data that are consistent with their expectations (Anderson & Lindsay, 1998; Chapman & Chapman, 1969). By this account, people's retrospective judgments on checklists should exaggerate the consistency of children's behaviors. For example, externalizers presumably would be described (erroneously) as displaying elevated rates of aggression across a range of situations, and internalizers would be described as displaying cross-situationally elevated rates of withdrawn behavior.

A second interpretation is that people's judgment skills, though suboptimal, are good enough to detect important situation–behavior contingencies. People's performance on a variety of judgment tasks improves when alternative methods are used (Cosmides & Tooby, 1996; Koehler, 1996), when people have direct experience with events (Christensen-Szalanski & Beach, 1982), and when alternative criteria are used to evaluate accuracy (Wright & Drinkwater, 1997). People can detect the cross-situational variability of behaviors when they observe them over an extended period of time (Shoda, Mischel, & Wright, 1993a) and when this variability is experimentally manipulated (Dawson, Zeitz, & Wright, 1989). In one recent experiment that manipulated how often hypothetical children encountered different situations and how they responded to them, adults were found to be more sensitive to the contextual origins of behavior than were standardized syndromal measures (Wright et al., 2001).

These findings suggest that adults should be able to report on the response patterns found for syndromal groups in previous observational research, with externalizing children being described as displaying elevated aggression primarily in response to aversive events, and mixed children being described as displaying "out-of-context" aggression and withdrawal in nominally positive situations. A summary judgment method should also replicate findings of how often these groups encounter different situations (Wright et al., 1999). A key implication of such evidence is that it should be possible to develop efficient standardized instruments that elicit useful information about the situational determinants of behavior.

Beyond examining teachers' contextualized assessments of internalizing, externalizing, and mixed groups, the present study aimed to clarify differences between children within the same syndromal group. Wright et al. (1999) reported only average situation–behavior profiles for syndromal groups, and so their "nomothetic" results do not reveal how well their average profiles describe individual boys within each group. If syndrome scores primarily assess children's overall behavioral output, as we suspect, then children within the same syndromal group could show wide variation in the specific situations that elicit their problem behaviors. From a strictly syndromal perspective, all that matters is the frequency of the child's behavior, not its contextual origins. For example, a child who becomes aggressive only in response to being teased by peers and one who becomes aggressive only in response to being instructed by adults could both be classified as externalizing if syndrome scales primarily assess overall rates of behavior. Thus, it seems likely that the average situation–behavior profiles reported by Wright et al. (1999) resulted from aggregating functionally distinct subgroups of children, highlighting the possibility that interventions based on average patterns could be useless or even harmful. The present study examined this issue by determining whether individuals—or clusters of individuals—within the same syndromal group display qualitatively different patterns of responses to events.

In sum, this research had two main goals. First, we aimed to extend the contextualized analysis of childhood psychopathology initiated in Wright et al. (1999) by evaluating an efficient teacher-report method for assessing children's social environments and their responses to them. We hypothesized that teachers would report distinctive situation–behavior profiles for syndromal groups that are widely studied in the literature (e.g., externalizing, mixed) and that these profiles would resemble those found in previous research using more direct observational methods (Wright et al., 1999). Second, we aimed to clarify how syndromal methods can obscure important functional differences between children who are members of the same syndromal group. We hypothesized that children who are indistinguishable in terms of their syndrome scores on the TRF can nevertheless show significant heterogeneity both in how often they encounter different social events (e.g., peer victimization vs. positive peer approach) and in the patterning of their aggressive and withdrawn responses to those events.

Method

The data used for the present study were collected in a large urban public school system in New England.[1] The sample included 34 special education (SPED) classrooms (elementary, middle school, and high school), which ranged in size from 6 to 12 students. Using teachers' ratings on Achenbach's (1993) TRF, four groups of boys were formed on the basis of their TRF internalizing and externalizing scores: a pure Internalizing (INT) group, a pure Externalizing (EXT) group, a mixed (MXD) group, and a nonclinical (NON) group. Using teachers' ratings of how often boys encountered different social situations and how they responded to them, we examined boys' environments and their contextualized response patterns.

Child and Adult Participants

Measures were obtained for 266 students. All participants were referred to SPED classrooms because of behavioral, emotional, or learning problems, and none were reported to have severe cognitive impairments. Of these, 45 were girls, reflecting their lower referral rates. Because the sample sizes for groups of interest would be too small to obtain stable estimates of effects for girls, they were removed from subsequent analyses. Seven boys were removed because of incomplete measures (see below), and 6 were removed because they were below the age range (under 6 years) of the participants in previous work (Wright et al., 1999). This produced a final sample of 208 boys (6–18 years old; mean age = 12.27 years, SD = 3.52 years). The ethnicity breakdown was 91 Latino, 66 White, 43 African American, 7 other, and 1 unknown. Respondents for the final sample were 34 teachers (21 women and 13 men).

Materials and Procedure

TRF. The 118-item TRF (Achenbach, 1993) includes 8 narrowband "syndromes"—Aggression (AGG), Delinquency (DEL), Withdrawal (WDR), Somatic complaints (SOM), Anxiety (ANX), Thought disorder (THO), Attention problems (ATT), and Social problems (SOC)—and two broader measures that are formed from these narrowband scales: Externalizing (AGG, DEL) and Internalizing (WDR, ANX, SOM). In this report all raw scores were converted to clinical T scores using Achenbach's (1993) procedure, which has been reported to be valid for SPED populations (McConaughy & Achenbach, 1996).

BETA. The second instrument Behavior–Environment Transactional Analysis consists of 110 items based on previous research (e.g., Shoda, Mischel, & Wright, 1993b, 1994; Wright & Mischel, 1987) and specifically adapted from the coding system used by Wright et al. (1999). In the latter research, the coding system was used to obtain hourly observations of children's behavior in context over 45 days; this previous research was conducted in a different setting, and none of the participants overlapped with the present study. In the current research, teachers used the BETA to provide retrospective ratings of how often a child encountered events and how often the child showed several responses to those events. The events and responses were closely modeled after Wright et al. (1999), with slight modifications to accommodate the change in setting and the retrospective rating format.

Of primary interest in the current study were the 48 BETA items assessing the conditional probability of a behavior occurring in response to a social event. Each of these items combined one of six events with one of eight responses, producing 6 × 8 combinations. The events were "peers boss or threaten [this student]" (threat), "peers tease or ridicule" (tease), "adults discipline or punish" (punish), "adults warn" (warn), "peers talk to [this student] in a friendly way" (talk), and "adults praise or compliment" (praise). The responses were "argues or quarrels" (argue); "teases or ridicules" (tease); "bosses or threatens" (threat); "hits, pushes, or physically attacks" (hit); "withdraws or isolates self" (withdraw); "whines or

[1] A portion of the data used here were also used in Study 1 of Wright et al. (2001). However, that study did not examine the conditional response measures or event rate measures used in the present study, and it did not examine groups defined on the basis of TRF internalizing and externalizing scores.

cries" (whine); "talks in a friendly way" (talk); "laughs or smiles" (laugh). Here are examples: "If a peer teases or ridicules this student, he/she bosses or threatens" and "If a peer bosses or threatens this student, he/she teases or ridicules." Six items assessed the base rates of the events, using the event items stated above (e.g., how often "peers boss or threaten this student"). For all event and conditional response items, teachers were told, "If you have not observed the event exactly as described, base your answer on events that are as similar to it as possible."

Another set of 48 items, produced by crossing the eight responses with the six events, assessed the reciprocal conditional probabilities, that is, how other people reacted to some behavior displayed by the target child. Eight items assessed the base rates of the responses (e.g., how often this student "argues or quarrels with others"). These "reciprocal" and behavioral base-rate items are not used in the present report. All items were rated using a 0 (*never*) to 6 (*very often*) scale.

Procedure. Teachers completed the TRF and BETA in the 10th–12th week of the academic year. Each teacher was responsible for his or her classroom of 6–12 children.[2] Respondents were instructed to consider the child's behavior over the past month, to work independently, and to complete the TRFs for all students before completing the BETAs. This instruction was used to ensure that teachers made their TRF ratings without being biased to think only about particular social contexts.

Preliminary Analyses

To test our hypotheses, we needed dependent variables similar to those used in previous research (Wright et al., 1999). Therefore, the following measures of the base rates of events were used: The rate of adult aversive events, *p*(adult aversive), was the average over two items (warn, punish); the rate of peer aversives, *p*(peer aversive), was the average over two items (threat, tease); the rate of adult positives, *p*(adult positive), was the item praise; and the rate of peer positives, *p*(peer positive), was the item talk. The "conditional response measures" assessed how often the child showed a given type of behavior (e.g., aggression) in response to a given type of social event (e.g., adult aversive). In this report, these measures are labeled using the conventional notation for a conditional probability, *p*(response|event), where "|" denotes "given." Aggression in response to aversive adult events, *p*(aggression|adult aversive), was the average over eight items, each referring to one of four responses (argue, tease, threaten, hit) to one of the adult aversive events. Withdrawal in response to aversive adult events, *p*(withdrawal|adult aversive), was similarly computed using the responses withdraw and whine. Although Wright et al. (1999) did not examine prosocial responses, the present study did, as other research indicates the importance of prosocial behavior in children's peer relations and psychosocial adjustment (Coie, Dodge, & Kupersmidt, 1990). The "prosocial" response to adult aversive events, *p*(prosocial|adult aversive), was computed as stated previously using the responses talk and laugh. Parallel measures were also computed for aggressive, withdrawn, and prosocial responses to adult positive, to peer aversive, and to peer positive events, using items identified previously.

In sum, this produced 3 (response: aggression, withdrawal, prosocial) × 4 (event: adult aversive or positive, peer aversive or positive), or a total of 12 conditional response measures.[3] TRF *T* scores are computed separately for boys ages 5–11 and those ages 12–18 (Achenbach, 1993). Because we had to be consistent with that approach, within each of those age groups we converted the above conditional response and event measures to *z* scores (i.e., $M = 0$, $SD = 1$ within age group). With the exception of certain age analyses presented later, all analyses used response and event measures in *z* score form.

Reliability and Temporal Stability

We first examined the internal consistency of the BETA scales that had multiple items. The alpha coefficients for the two aversive event scales were .89 (peer aversive) and .92 (adult aversive). The alpha coefficients for the 12 conditional response measures ranged from .71 for *p*(withdrawal|adult positive) to .93 for two tied items, *p*(aggression|adult aversive) and *p*(aggression|peer aversive). The median coefficient of the 12 conditional response measures was .84.

Reliability of the TRF has been reported elsewhere (e.g., Achenbach, 1982). When the interval is 1 week to 1 month, test–retest reliability is .82–.87. When the interval is 1.5–6 months, short-term stability is .57–.83. To assess stability for the BETA, we examined 151 participants for whom two BETAs were obtained, one in Weeks 10–12 and another 12–14 weeks later. Because certain analyses relied on the overall patterning of boys' responses to events, we examined the stability of these patterns. For each boy, we correlated his vector of aggressive responses to each of four events at Time 1 with his vector of aggressive responses to those events at Time 2, producing one correlation per boy. We then averaged the correlations over the 151 boys. (All mean correlations were computed using Fisher's *r*-to-*z* transforms, with back-transforms for reporting purposes; see McNemar, 1962, p. 139). The same procedure was used for withdrawal and prosocial responses. The mean within-subject correlations were .70 for withdrawal responses, .69 for aggression, and .64 for prosocial, $ts(150) > 8.70$, $ps < .001$. Using the same procedure, we obtained a mean within-subject stability for the event measures of .73, $t(150) = 10.54$, $p < .001$.

We also examined the stability of each BETA scale defined previously. For each of the four response measures for aggression, we correlated (using Pearson's product–moment correlation) boys' scores for Time 1 and Time 2, then averaged the four correlations. The same procedure was used for the withdrawal and prosocial responses. The mean correlations were as follows: .67 for aggression responses, .66 for withdrawal responses, and .51 for prosocial responses. (The lower correlation for prosocial responses was due in part to a floor effect, with few boys showing prosocial responses to tease or threat.) Parallel analyses for event rate measures (see above) yielded a mean correlation of .58; the correlation for one event (praise) was attenuated by a ceiling effect for that socially desirable item; the correlations for the remaining events were .57–.65.

Categorization of Boys

TRF groups. To maintain adequate group sizes, groups were formed based on whether boys' TRF Internalizing and Externalizing *T* scores were ≤65 or >65: EXT (low Internalizing, high Externalizing, $n = 68$), INT (high Internalizing, low Externalizing, $n = 20$), MXD (high on both, $n = 57$), NON (low on both, $n = 63$). The small group size for INT participants, which stems from their referral rates to SPED classrooms, dictates caution in interpreting their results and leads us to focus on the EXT and MXD groups.

---

[2] We recognize the nonindependence of the ratings each teacher provided for the students in his or her classroom. This is a general characteristic of any school-based research of the type reported here, including much of the literature on social status, peer-assessed, and teacher-assessed social behavior (e.g., Coie, Terry, Lenox, & Lochman, 1995; Ladd & Burgess, 1999).

[3] It would have been possible to analyze conditional response ratings even when a mean rating for a condition was 0. Strictly speaking, however, a conditional probability is undefined when the condition never occurs. Therefore, an individual response item for a boy (e.g., *p*[Tease | Threat]) was taken to be undefined if the associated specific condition (Threat in this case) never occurred (i.e., had an event rating of 0), and we computed the average conditional response for the aggregated measure (e.g., *p*[Aggression | Peer Aversive]) over the remaining individual items. The seven cases that had scores of 0 for every aversive peer-event item or for every aversive adult-event item were removed from the analyses. There were no cases with event scores of 0 for *p*(Peer Positive) or *p*(Adult Positive).

Cluster analyses. To test certain hypotheses, we performed hierarchical cluster analyses (Everitt, 1980) of the participants within each TRF group (e.g., EXT), classifying boys according to patterning of the 12 responses described previously. These analyses used Euclidean distances and the compact method (Everitt, 1980). We required that a cluster have at least 15 participants to be analyzed further and so excluded the small INT group. Within each remaining group, we examined each dendogram cutoff that generated up to 10 subclusters, then selected as the final dendogram cutoff the one that yielded the lowest mean fusion level (i.e., highest intracluster similarity), resulting in less than 10% of the participants being lost because of being in clusters with $n < 15$. This generated two EXT subclusters (henceforth EXT I and EXT II, with ns = 51 and 17, with a loss of 0 participants), and two MXD subclusters (MXD I and MXD II, with ns = 33 and 22, with a loss of 2 participants). For the NON group, only one cutoff met our criteria, yielding one usable group ($n = 60$) and one unusable group ($n = 3$), with all other cutoffs resulting in more than 10% attrition because of cases being in small groups. Because the single large cluster necessarily resembled the original NON group, no further analyses were performed on it.

Results

TRF Syndrome Profiles

Before turning to our primary analyses, we examined the TRF syndrome profiles for the four TRF syndrome groups. This was essential to facilitate comparisons with other research using the TRF. The TRF syndrome profiles for each group are shown in Figure 1. Given that these groups were created using TRF Internalizing and Externalizing scales, it is not surprising that the TRF syndrome profiles differentiated between the groups. As shown in Figure 1 (see the subscripts next to group labels), multivariate Hotelling's T^2 tests indicated significant differences between all pairs of groups, with the smallest T^2 for the INT versus MXD comparison, $T^2(8, 68) = 66.07$, $p < .001$. To identify the most distinctive features of each TRF group, we examined whether each TRF syndrome for a given group differed significantly from the overall mean for our entire sample of 208 boys. (For these and all related tests we used an alpha level of .01, two-tailed.) As shown in Figure 1, the EXT group displayed elevated DEL and AGG scores and depressed WDR and ANX scores. The INT group displayed elevated WDR and ANX scores and depressed DEL and AGG scores. The MXD group displayed elevated rates for each syndrome, and the NON group displayed depressed rates for each.

Contextualized Response Patterns

We next examined whether teacher-reported situation–behavior profiles discriminated between the TRF syndromal groups. Figure 2 presents the mean situation–behavior profile for each TRF group. As in the preceding analysis, we performed Hotelling's multivariate T^2 for each pairwise comparison of groups, using all conditional response measures. As summarized in Figure 2 (see the subscripts next to each group label), a significant difference was found for five of the six comparisons, with the smallest significant T^2 for the INT versus MXD comparison, $T^2(12, 64) = 35.17$, $p < .01$, and the largest for the MXD versus NON comparison, $T^2(12, 107) = 134.42$, $p < .001$. The only nonsignificant comparison was between the EXT and MXD groups, $T^2(12, 112) = 17.93$, $p > .10$. We return to this apparent "confusion" of the EXT and MXD groups when we analyze the subclusters within these groups.

Next, to clarify the distinctive features of the situation–behavior profiles for each TRF group, we examined whether each conditional response for each group differed significantly from the overall mean for our entire sample. As shown in Figure 2, the EXT group showed elevated aggression in response to adult aversive and peer aversive events, but otherwise the conditional response measures for this group did not differ significantly from population base rates. Thus, teachers did not report the EXT group to be more likely than other boys to display aggression in response to positive events. This is consistent with results reported by Wright et al. (1999), which, as we have noted, were based on direct observations and a different population. To evaluate this correspondence more directly, we first identified the conditional response measures that were used in both studies. There were eight such measures: four for the aggression responses and four for the withdrawal responses (note that prosocial responses were not reported in Wright et al., 1999, and so could not be examined). Next, we correlated (using Pearson's product–moment correlation) the eight conditional response means for the EXT group in the current study with the corresponding eight means for that group from the previous study. The correlation between these sets of scores was .61. Thus, despite the numerous differences between the studies, and their distinct samples of children and adults, the situation–behavior profiles for the EXT groups were related.

The INT group showed depressed rates of aggression in response to peer positive and peer aversive events (see Figure 2). Although the small size of this group dictates caution, it is notable that there is no evidence that teachers reported the INT group to be consistently withdrawn in response to all social events. Rather, only in response to aversive social events did the INT group show evidence of elevated rates of withdrawal (see Figure 2). Overall, the situation–behavior profile reported for the INT group closely resembled the profile reported in Wright et al. (1999). Using the procedure described previously, we found that the correlation between the situation–behavior profiles over the two studies was .94.

The MXD group was notable in two respects. First, it displayed relatively elevated rates of aggression and withdrawal in response to all events, with significantly elevated rates for five conditional responses (see Figure 2). Second, it was the only group with an elevated rate of any problem behavior in response to positive peer events. Although the latter result is consistent with previous findings based on direct observations (Wright et al., 1999), the generally elevated rates of aggression and withdrawal in response to most events is not. The correlation between corresponding conditional measures for the MXD groups in the present study and in Wright et al. (1999) was only .39. We return to this apparent discrepancy when we decompose that group into functional subgroups.

Although the clinical groups were our main concern, we also examined the NON group. As shown in Figure 2, this group showed depressed rates of aggressive and withdrawn behavior in every context but showed elevated prosocial behavior only in response to peer positive events. Thus, the NON group resembled the EXT and INT groups in that it also showed its "characteristic" behavior (in this case, prosocial) only in response to certain social events (in this case, positive events).

In sum, we found evidence that situation–behavior profiles discriminated among the TRF groups and that the profiles for the

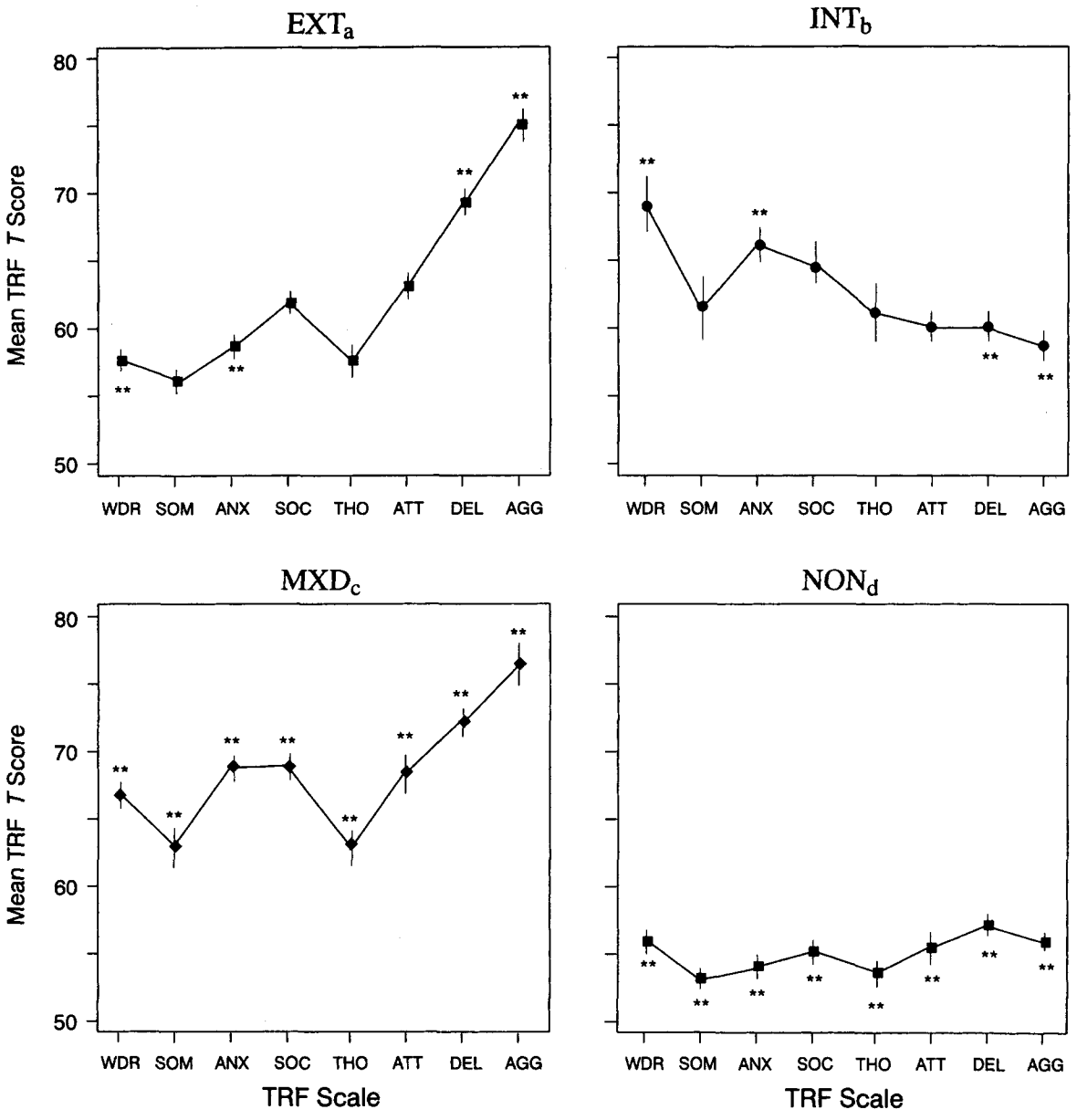

Figure 1. Mean (±1 *SEM*) Teacher Report Form (TRF) syndrome scores as a function of syndromal group. EXT = low Internalizing, high Externalizing *T* scores; INT = high Internalizing, low Externalizing; MXD = high on both; NON = low on both. Asterisks above (below) a mean indicate it was significantly higher (lower) than the mean for the entire sample. * $p < .01$. ** $p < .001$. Groups marked with different subscripts differed on multivariate pairwise Hotelling's T^2 comparisons. WDR = Withdrawal; SOM = Somatic Complaints; ANX = Anxiety; SOC = Social Problems; THO = Thought Disorder; ATT = Attention Deficit; DEL = Delinquency; AGG = Aggression.

EXT and INT groups resembled those found in previous research using behavioral observations. In particular, these groups showed the greatest elevation of their aggressive or withdrawn behavior primarily in response to aversive events. Consistent with previous research, the MXD group was the only group to show elevated rates of any problem behavior in response to positive peer events. Unexpectedly, the MXD group was reported to display elevated problem behaviors in response to a wide range of social events. As we elaborate later, interpreting these results requires information about the functional subgroups that exist within each of the TRF syndromal groups.

Though not our main focus, we also examined age differences in boys' situation–behavior profiles, using the age groups on which TRF norms are based (<12 years vs. ≥12 years). Within each TRF group, we performed a multivariate Hotelling's comparison of the age groups (e.g., young vs. old EXT boys) using their 12 condi-

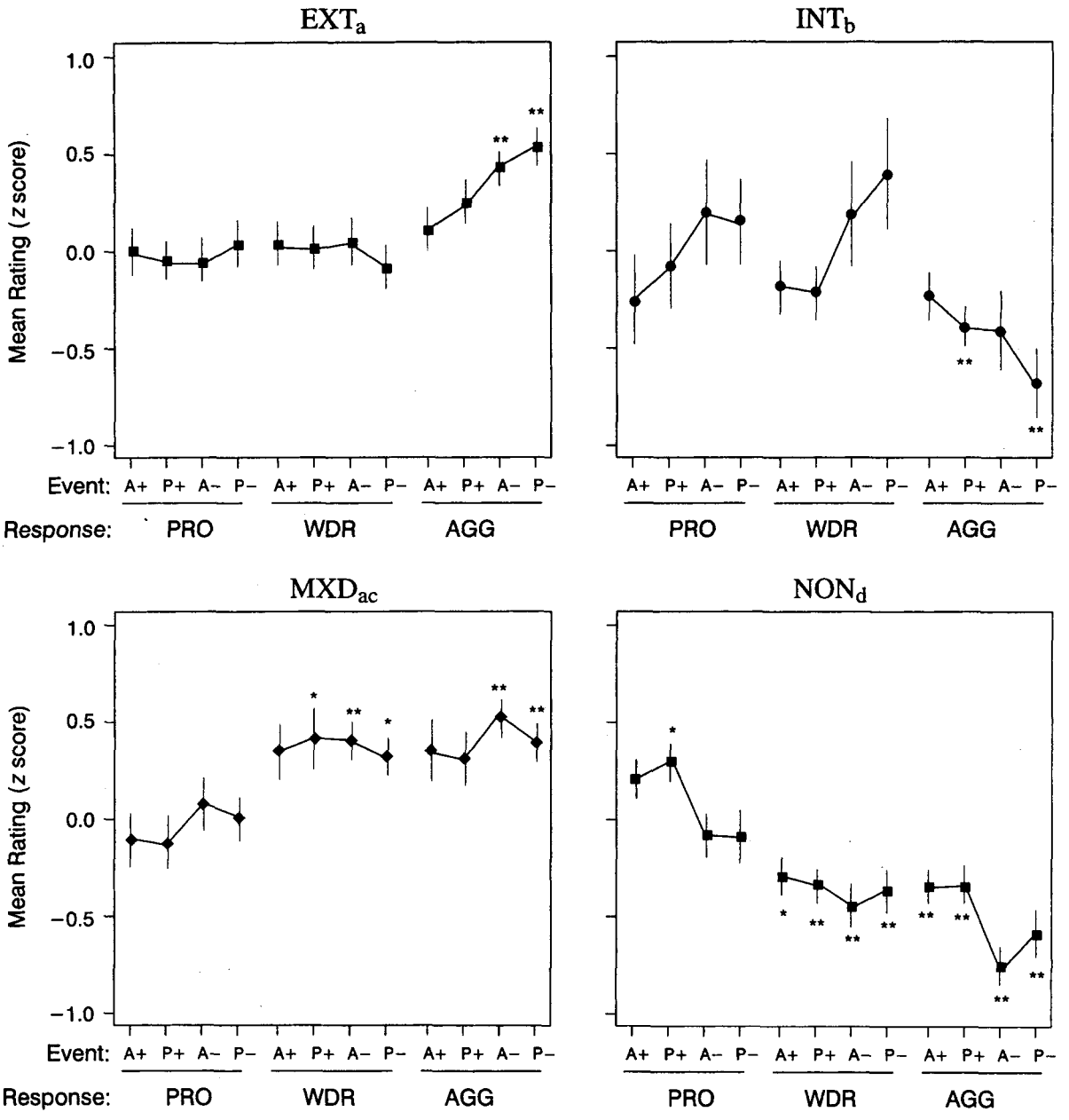

Figure 2. Teachers' mean (±1 *SEM*) ratings (*z* scores) of boys' prosocial, withdrawn, and aggressive behavior, as a function of social event and syndromal group (EXT = low Internalizing, high Externalizing *T* scores; INT = high Internalizing, low Externalizing; MXD = high on both; NON = low on both.) Asterisks above (below) a mean indicate it was significantly higher (lower) than the mean for the entire sample. * $p < .01$. ** $p < .001$. Groups marked with different subscripts differed on multivariate pairwise Hotelling's T^2 comparisons. Event labels: A+ = adult positive; P+ = peer positive; A− = adult aversive; P− = peer aversive. Response labels: PRO = prosocial; WDR = withdrawn; AGG = aggressive.

tional response measures. To be consistent with the age-norming of TRF *T* scores, we first used response measures in their *z*-score form (computed as previously described). None of the age comparisons was significant (*ps* > .4). To illustrate the similarity of the age groups, we correlated their mean situation–behavior profiles within each TRF group; the correlations were EXT, .72; INT, .85; MXD, .76; and NON, .95 (*dfs* = 10, *ps* < .01). To examine age differences in boys' absolute response levels, we repeated the age analyses using teachers' raw (0–6) ratings. We obtained significant multivariate differences between the age groups within the EXT, $T^2(12, 55) = 39.19$, $p < .01$; MXD, $T^2(12, 44) = 31.31$, $p < .04$; and NON, $T^2(12, 50) = 41.65$, $p < .01$, groups. Post hoc comparisons (Tukey's HSD) for each response measure revealed the following significant differences (all *ps* < .05). Young EXT

children, compared with their old EXT counterparts, showed less prosocial responses to peer positives and peer aversives, more withdrawal responses to adult aversives, and more aggressive responses to peer aversives. Young MXD boys showed more withdrawn responses to adult aversives and peer aversives and more aggressive responses to peer aversives. Young NON boys showed less prosocial responses to adult aversives and more aggressive responses to peer aversives. In sum, we found age differences when we examined the absolute levels of boys' responses to events, but not when we used measures that were appropriately age-normed to be consistent with TRF T scores. We return to the issue of age differences in boys' absolute response levels in the Discussion section.

Patterning of Social Events

The preceding analyses reveal important differences between TRF syndromal groups in how boys respond to events, but they do not speak to differences between these groups in how often boys encounter these events in their interactions with peers and adults. Guided by previous research (Wright et al., 1999), we hypothesized that the TRF groups would also differ in their rates of encountering aversive and positive events, with the EXT group being especially likely to encounter aversive adult events and the MXD group being most likely to encounter aversive peer events.

As shown in Table 1, our analyses of the event measures generally supported these hypotheses. As indicated by the subscripts in Table 1, Hotelling's T^2 was significant for all but one pairwise comparison, with the smallest significant T^2 occurring for the INT versus NON comparison, $T^2(4, 78) = 16.47, p < .01$. The exception was the INT versus MXD comparison, $T^2(4, 72) = 8.72$, $p > .05$. Table 1 also indicates that the EXT group encountered elevated rates of adult aversive events, whereas the MXD group encountered elevated rates of both adult and peer aversive events. The NON group showed elevated rates of adult positive events and depressed rates of both adult and peer aversive events.

We examined age differences using methods previously described. Consistent with previous analyses, when age-normed event z scores were used, no Hotelling's multivariate age comparison within any TRF group was significant ($ps > .2$), but when raw event scores (i.e., original 0–6 ratings) were used, all comparisons between age groups within TRF groups were significant ($ps < .02$). Young EXT boys, compared with older EXT boys, encountered higher rates of adult positives and peer aversives; young MXD boys encountered higher rates of adult aversives and peer aversives; young INT and NON boys encountered higher rates of adult positives than their older counterparts ($ps < .05$, using Tukey's HSD).

Table 1
Teachers' Mean Ratings of the Likelihood of Encountering Social Events as a Function of Teacher Report Form (TRF) Syndrome Group

	TRF syndrome group			
Social event	EXT_a	INT_b	MXD_b	NON_c
Adult positive	−.26	−.10	.10	.29*
Peer positive	−.09	.21	−.13	.16
Adult aversive	.47**	−.24	.27*	−.66**
Peer aversive	.03	.23	.48**	−.51**

Note. Entries are mean event ratings (z scores). Asterisks indicate means that are significantly different from the mean for the entire sample. Groups marked with different subscripts differed on multivariate pairwise Hotelling's T^2 comparisons. EXT = low Internalizing, high Externalizing T scores; INT = high Internalizing, low Externalizing; MXD = high on both; NON = low on both.
* $p < .01$. ** $p < .001$.

Decomposition of EXT and MXD Groups

One theme of the present research is that syndrome measures, by ignoring context, do not reveal critical differences between syndromal groups in how boys respond to social events or in how often they encounter those events in their environments. A second theme of this research, to which we now turn, is that syndromal methods can also obscure important functional differences between boys who are members of the same syndromal group. We hypothesized that boys who are indistinguishable in their TRF syndrome scores can nevertheless show significant heterogeneity in the quality of their social environments and their conditional response patterns.

To assess this, we examined the clusters within each TRF group identified using hierarchical cluster analysis of boys' conditional response measures.[4] As shown in Figure 3, the EXT I subcluster resembled the larger EXT group, especially in that it also showed elevated aggression in response to peer aversive events. The EXT II subcluster showed a different pattern from the larger EXT group and the EXT I subcluster, with elevated rates of aggressive and withdrawn behavior in response to every event, including adult positive and peer positive events. This group also showed anomalously high rates of prosocial responses to peer aversive events. Hotelling's multivariate T^2 using all conditional response measures simultaneously indicated that the EXT I and EXT II subclusters differed significantly, $T^2(12, 55) = 157.68$, $p < .001$. (Figure 3 summarizes all pairwise comparisons of subclusters using subscripts.) In short, the EXT I and EXT II subclusters showed different patterns of responses to events, not only for their prosocial and withdrawn responses but also for their aggressive responses.

The breakdown of the MXD group revealed two sharply different response patterns (see Figure 3), neither of which resembled the larger MXD group. The MXD I subcluster showed elevated aggression in response to adult aversive and peer aversive events and elevated withdrawal in response to adult aversive events. The MXD II subcluster showed elevated withdrawn responses to adult positive and peer positive events and elevated aggressive re-

[4] In view of the risk that clustering methods can capitalize on trivial variation (see Everitt, 1980), several aspects of our results should be noted. First, our selection of contexts and responses was based on extensive previous research demonstrating their relevance to the types of children we studied (e.g., Patterson, 1976, 1997; Wright et al., 1999). Second, our results show that our methods did not "force" subgroups to appear. For the nonclinical group, no subgroups met our criteria. Third, when subgroups were found within a TRF group, there is little evidence that our methods merely capitalized on trivial variation. Rather, the differences between subgroups were substantial (see Figure 3).

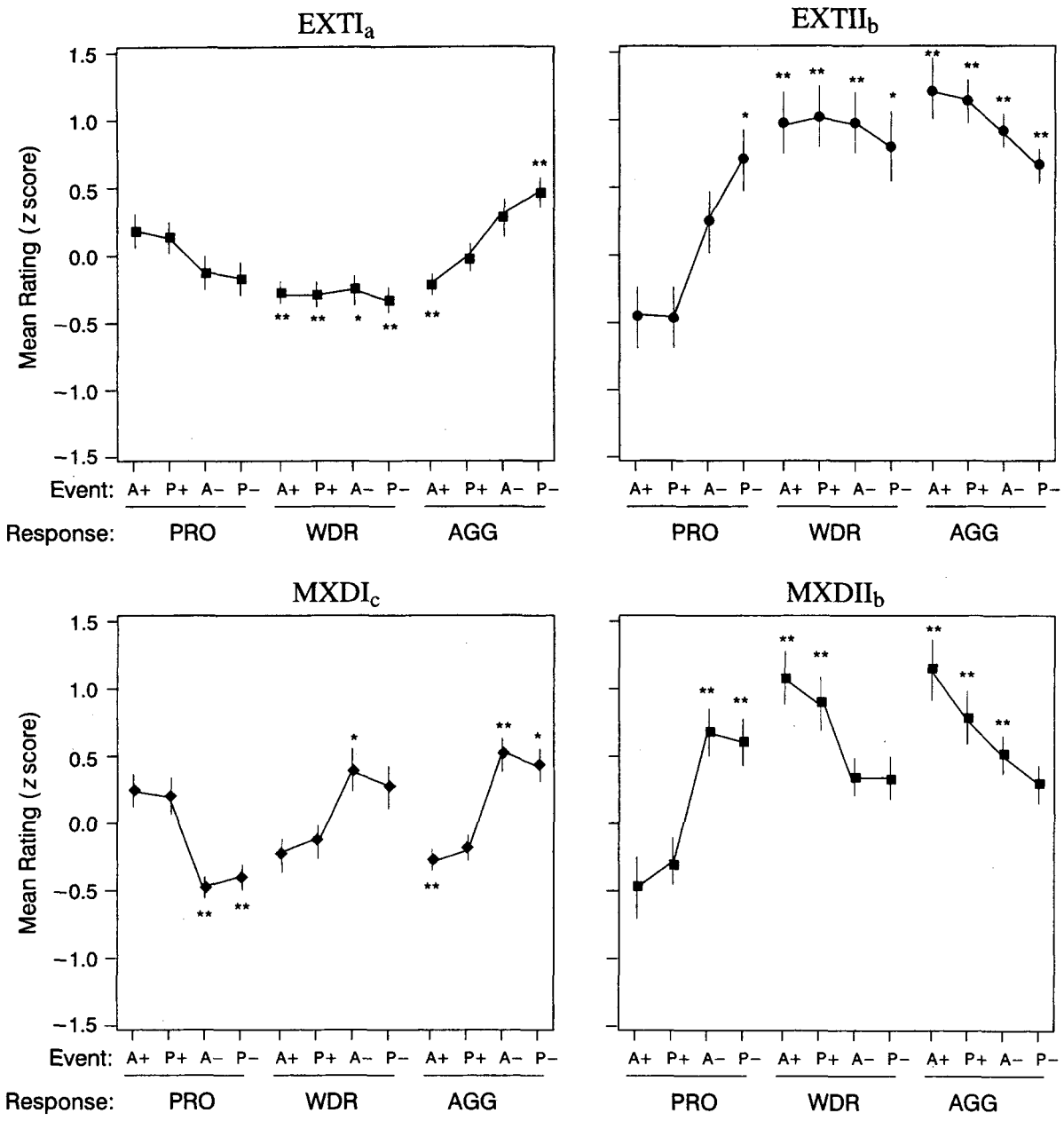

Figure 3. Teachers' mean (±1 *SEM*) ratings (*z* scores) of children's prosocial, withdrawn, and aggressive behavior, as a function of social event, for the two subclusters of the externalizing (EXT) and mixed (MXD) syndrome groups. Asterisks above (below) a mean indicate it was significantly higher (lower) than the mean for the entire sample. $*p < .01$. $**p < .001$. Groups marked with different subscripts differed on multivariate pairwise Hotelling's T^2 comparisons. Event labels: A+ = adult positive; P+ = peer positive; A− = adult aversive; P− = peer aversive. Response labels: PRO = prosocial; WDR = withdrawn; AGG = aggressive.

sponses to all events except peer aversive. As with the EXT II group, the MXD II was notable in that it showed elevated prosocial responses to aversive events. Hotelling's multivariate T^2 indicated that the MXD subclusters were different, $T^2(12, 42) = 126.22$, $p < .001$. We also examined the relation between the EXT and MXD subclusters. Consistent with the results shown in Figure 3, the only comparison that was not significant was between the EXT II and the MXD II subclusters, $T^2(12, 26) = 23.51$, $p > .2$ (see the subscripts following group labels in Figure 3).

In view of the differences in their situation–behavior profiles, one might expect that the EXT I and EXT II subclusters would also differ in the social events they encountered. As shown in Table 2, the EXT I subcluster had an elevated rate of adult aversive events, whereas the EXT II subcluster had an elevated rate of peer aver-

Table 2
Teachers' Mean Ratings of the Likelihood of Encountering Social Events for the Functionally Defined Subclusters

	Subcluster			
Social event	EXT I	EXT II	MXD I	MXD II
Adult positive	−.12	−.65	.35	−.22
Peer positive	−.08	−.09	.00	−.20
Adult aversive	.48**	.45	.27	.23
Peer aversive	.18	.66**	.42	.55*

Note. Entries are mean event ratings (*z* scores). Asterisks indicate means that are significantly different from the mean for the entire sample. EXT = low Internalizing, high Externalizing *T* scores; MXD = high on both.
* $p < .01$. ** $p < .001$.

sive events. The multivariate comparison between these two subclusters was significant, $T^2(4, 63) = 19.18, p < .01$. As shown in Table 2, the MXD I subcluster showed no significant deviation from population base rates, whereas the MXD II subcluster showed significantly elevated peer aversive events. The comparison between the MXD subclusters was not significant ($p > .2$). In sum, although the MXD subclusters were different in how they responded to different social events (see Figure 3), they did not differ in the frequency of encountering the social events we assessed.

Finally, we tested the hypothesis that the subclusters within each TRF group, despite their considerable differences in how they responded to different social events, would be difficult to discriminate using TRF profiles. As expected, the eight narrowband TRF syndromes were similar for the EXT subclusters, with AGG and DEL being the highest syndrome scores in each case, and WDR, SOM, and ANX considerably lower (see Figure 4). Hotelling's T^2 indicated that the EXT I and EXT II subclusters did not differ significantly, $T^2(8, 59) = 12.22, p > .2$ (see the subscripts following group labels in Figure 4). Likewise, the TRF syndrome profiles for the two MXD subclusters were also similar, with AGG and DEL scores highest, SOM and THO scores lowest, and ANX and SOC intermediate for both subclusters. The MXD I and MXD II subclusters did not differ significantly, $T^2(8, 46) = 5.52, p > .5$.

Discussion

Using adults' assessments of boys' social environments and how they responded to them, the present study found that distinctive behavior patterns were associated with commonly studied syndromal groups. These distinctive patterns could not be discerned from boys' TRF syndromes alone, as these syndromes provide no direct information about the contextual origins of behavior. We also found significant functional heterogeneity within syndromal groups that was not revealed by boys' syndrome scores. For example, we found two subgroups of boys in the mixed syndrome group who displayed dramatically different patterns of responding to social events, with one subgroup displaying elevated aggression only in response to aversive events (e.g., adult punish, peer threat) and another subgroup displaying elevated aggression in response to positive events (e.g., adult praise, peer talk). Despite the profound differences between these groups in the contextual origins of their aggression, they were indistinguishable in their TRF syndrome scores, even when all narrowband syndromes were examined.

Taken together, these results illuminate two interpretative problems associated with syndromal methods: Differences between syndromal groups in the contextual origins of their behavior, as well as functional differences within syndromal groups, are difficult to recover from context-free syndrome scores. The results also illustrate how clinicians could be misled in their interpretations if they overrelied on standardized syndromal methods and failed to examine contextual influences. Although these general points have been made repeatedly by proponents of functional analysis (e.g., Haynes & O'Brien, 1990; Scotti et al., 1996), our results provide direct empirical evidence of the extent and nature of the contextual information that can be obscured by syndromal approaches.

It may appear obvious, in hindsight, that teachers are sensitive to differences between boys in the situational determinants of their behavior. Yet the literature on laypeople's and clinicians' judgment shortcomings (e.g., Koehler, 1996; Ross & Nisbett, 1991) makes it clear that we should resist this hindsight. Judging from this literature, it is possible that teachers would grossly overstate the consistency of externalizing boys' aggressive behavior, perhaps reporting that such boys are more likely than others to display aggression in response to all of the social events we examined. This is not what we observed. Externalizing boys, rather than displaying elevated rates of aggression in all situations, were reportedly more likely to display aggression only in response to aversive adult and peer events. Internalizing boys, rather than displaying elevated rates of withdrawal in all situations, likewise showed variability in their responses to events. Nonclinical boys, rather than displaying elevated prosocial behavior in all situations, did so only in response to positive events. These contextualized behavior patterns resemble those reported in research that used a different (residential treatment) population and extensive hourly observations of behavior (Wright et al., 1999). Taken together, these findings contradict the view that teachers perceive children primarily in terms of overall rates of behavior, and they suggest that teachers may be able to provide clinicians with useful information about important situational influences.

The results for the mixed group were notable in several respects. First, this group appeared more consistent across situations than other clinical groups in that it showed higher rates of problem behaviors in a wider range of situations. Second, the mixed group was the only group to display elevated rates of any problem behavior in a nominally positive situation (i.e., being talked to in a friendly way by peers), a result that resembles previous results based on behavioral observations (Wright et al., 1999). Third, and most important, the mixed group consisted of two subgroups (of comparable size) that showed qualitatively different response patterns, neither of which resembled the average nomothetic pattern for the larger mixed group. One of the mixed subclusters (MXD I) showed elevated rates of aggressive and withdrawn responses to aversive events, but not to positive ones, whereas the other (MXD II) showed sharply elevated rates of aggressive and withdrawn responses to positive events. Thus, from the average situation–behavior profile for the entire MXD group, one might (erroneously) conclude that individual boys in the MXD group show high rates of problem behaviors in response to all social events, whereas in fact neither MXD subcluster of boys showed such a pattern.

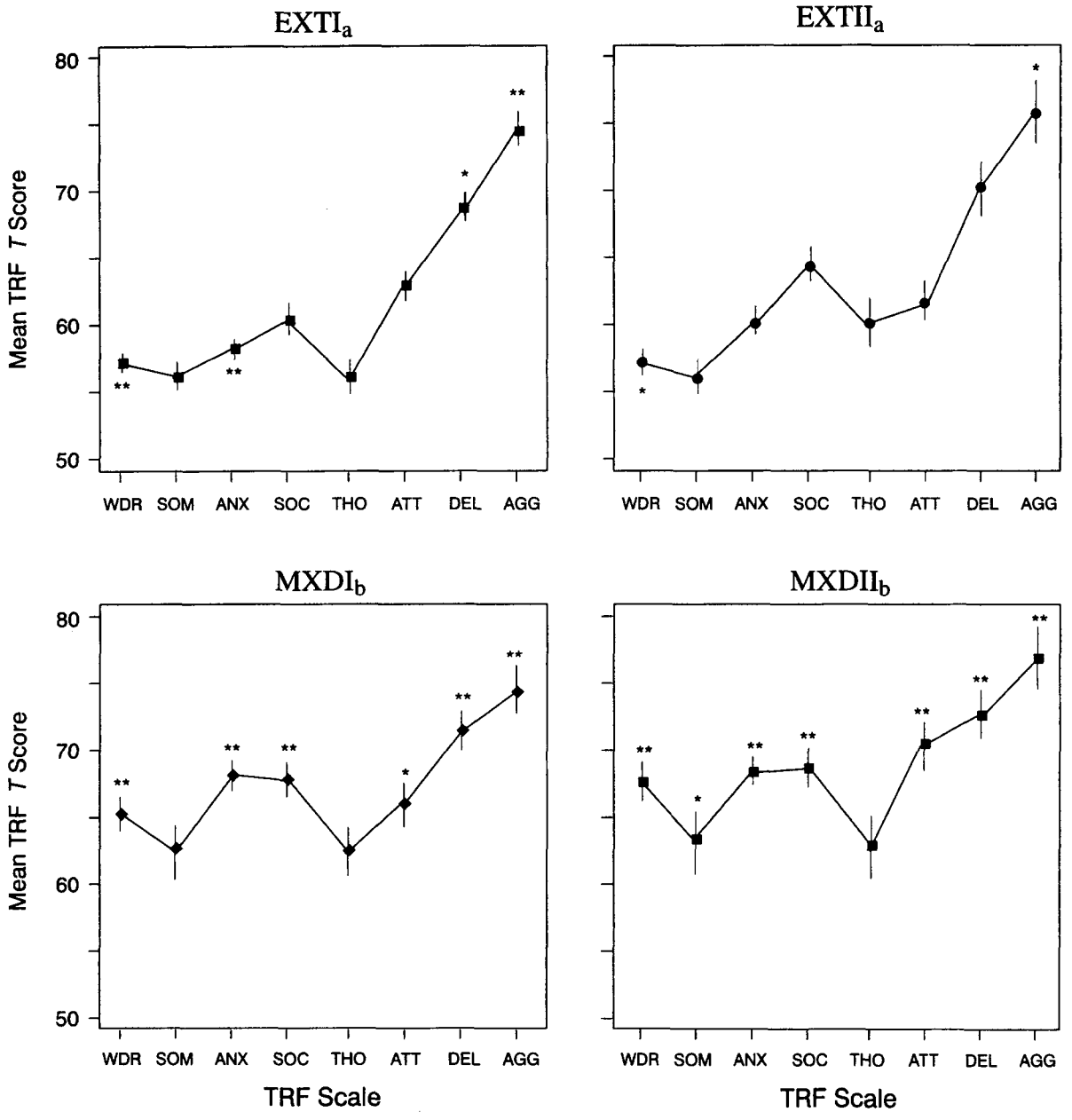

Figure 4. Mean (±1 *SEM*) Teacher Report Form (TRF) syndrome scores for the two subclusters of the externalizing (EXT) and mixed (MXD) syndrome groups. Asterisks above (below) a mean indicate it was significantly higher (lower) than the mean for the entire sample. * $p < .01$. ** $p < .001$. Groups marked with different subscripts differed on multivariate pairwise Hotelling's T^2 comparisons. WDR = Withdrawal; SOM = Somatic complaints; ANX = Anxiety; SOC = Social problems; THO = Thought disorder; ATT = Attention deficit; DEL = Delinquency; AGG = Aggression.

Similarly, the average behavior pattern for externalizing boys was not necessarily representative of the members of that group, as it resulted from aggregating two distinct subpatterns. The larger externalizing subcluster (EXT I) showed elevated rates of aggression when teased or threatened by peers but depressed rates of aggressive responses to adult praise; the smaller externalizing subcluster (EXT II) showed elevated problem behaviors in response to all events, including nominally positive ones (adult praise, peer talk). In sum, within both the EXT and MXD syndromal groups, we observed considerable within-group heterogeneity in the patterning of boys' responses to social events.

Implications of these subcluster results for clinical assessment and intervention deserve consideration. The EXT I subcluster, with its localized aggression in response to peer aversives, suggests boys who are discriminating in their appraisals of situations and who expect positive outcomes to follow when they counterattack

(Boldizar, Perry, & Perry, 1989). In conjunction with their elevated rates of adult aversives, but not peer aversives, these boys resemble those whose aggression develops through coercive cycles in the home (Patterson, 1982, 1997). Interventions with children who resemble EXT I boys presumably would focus on breaking the escalating cycle of adult control tactics and boys' aggressive reactions to those tactics, with special attention to the negative reinforcement these boys may receive for their aggression (Patterson, 1982). The MXD I subcluster, with its elevated aggression and withdrawal in response to aversive adult events, suggests boys who are emotionally liable (alternately angry or sad) or who perceive adults as inconsistent in how they respond to their aggression versus withdrawal (Ladd & Burgess, 1999). For such boys, altering the rate of aversive events appears less critical, as they do not encounter particularly high rates of those events in their interactions with peers or adults; rather, it may be more critical to help these boys develop emotion regulation skills that are needed to deal effectively with adult conflict, and perhaps help the adults who work with these boys to respond more consistently to their aggressive and withdrawn behavior.

The EXT II and MXD II subclusters, with their "out-of-context" aggressive and withdrawn responses to positive events, and elevated rates of encountering peer aversive events, suggest boys who are ineffective in intimidating peers, and who experience nominally positive social interactions very differently from other boys. These may be boys who have severe encoding biases or deficits (Dodge & Coie, 1987) and who are surprised by positive feedback that is inconsistent with previous experience (Casey & Schlosser, 1994). One goal of interventions with these boys would be to reduce the high rate of aversive peer events they encounter, perhaps by changing the composition or dynamics of the peer group itself. A second goal would be to improve their encoding and interpretation of benign social events, with the objective of replacing their contextually anomalous aggressive and withdrawn responses to those events with more prosocial responses.

Additional research will be needed to identify the developmental outcomes associated with these behavior patterns. Boys with EXT II and MXD II patterns deserve special attention, as children who display both aggressive and withdrawn behavior may be at risk for severe maladjustment (e.g., Ladd & Burgess, 1999; Ledingham, 1981; Serbin et al., 1998). One intriguing possibility is that aggressive–withdrawn children who are at high risk and whose social deviance persists over years (Schwartzman, Ledingham, & Serbin, 1985) are not simply those who show both aggressive and withdrawn behavior, but those—such as our EXT II and MXD II subclusters—who show these behaviors in atypical contexts. Previous research on aggressive–withdrawn children has tended to focus on children's base rates of aggression and withdrawal rather than on the contexts in which these behaviors occur. This approach may exclude EXT II children who do not have high overall rates of withdrawal but who resemble MXD II children in that they are frequently victimized by peers and show contextually anomalous responses to positive events. Our findings suggest that researchers studying aggressive, withdrawn, and aggressive–withdrawn children may find it useful to examine not only their behavioral base rates but the contextualized response patterns that underlie these base rates.

Although we did not set out to test hypotheses about age differences, our results highlight both how contextual influences differ and how they do not differ over age groups. TRF *T* scores, which we used to identify syndrome groups, are normed separately for boys under and over age 12, and for certain analyses we therefore relied on comparably age-normed measures of boys' environments and how they responded to them. Using these measures, we found little evidence of age differences. For example, both young and old boys in the EXT group, relative to their respective age mates, showed high rates of aggressive responses to aversive peer events. However, our analyses of non-age-normed data did reveal age differences in the absolute rates of events and boys' responses to them. The results for young boys in the MXD group are especially noteworthy. Relative to their older MXD counterparts, these boys encountered high rates of aversive events and they showed high rates of problem behaviors in response to those events. A critical task for future research will be to examine the developmental outcomes for young children who show this combination of aversive environments and highly reactive (and mixed) response styles. Although limitations of our sample made it impossible to subdivide our functional subgroups further, it would be especially helpful to examine the developmental trajectories for young MXD II (and EXT II) boys, as they may have especially disturbed social interactions.

The present results illustrate possible benefits of contextualized methods, but overgeneralizations should be avoided. Because it would be imprudent to overrely on teachers or any other single secondhand source, future research should examine a wider range of respondents (e.g., parents, clinicians) and couple retrospective reports with direct behavioral observations. Because the particular scales and subclusters of cases one obtains are always influenced by the specific items, raters, and target samples that are used (see Block, 1995), future work should examine the generalizability of our findings using a wider range of contexts, responses, adult raters, and target children. Because of the demographics of the urban school system and SPED classrooms we examined, our sample consisted only of boys, most of whom were Latinos and African Americans from lower income families. Clearly, future research should examine the social environments and situation–behavior profiles for both boys and girls in different educational settings and from different sociocultural backgrounds.

Although many questions about the relation between syndromal and contextualized approaches to studying childhood psychopathology remain to be explored, the present results indicate that standardized assessment need not be contextually impoverished. The same teachers on whom syndromal checklists rely for overall behavior summaries also appear to be interested in the events that influence behavior, reporting that different syndromal groups, and even different members of the same syndromal group, show qualitatively different patterns of responses to events. From our perspective, the significance of these findings does not lie in the prospect of reifying the behavior patterns we observed—or any other set of fixed patterns—to "type" children. Rather, it lies in illustrating how one might begin to bridge the existing gap between syndromal assessment tools—which are efficient but contextually insensitive—and fine-grained, case-specific functional analyses—which are contextually sensitive but often laborious, idiosyncratic, and difficult to compare. Such a bridge, perhaps incorporating methods described here, could help guide researchers and clinicians more efficiently toward the kind of functional understanding of behavior that is needed for effective intervention.

References

Achenbach, T. M. (1978). The child behavior profile: I. Boys aged 6–11. *Journal of Consulting and Clinical Psychology, 46,* 478–488.

Achenbach, T. M. (1982). Assessment and taxonomy of children's behavior disorders. In B. B. Lanhey & A. E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 5, pp. 1–38). New York: Plenum.

Achenbach, T. M. (1993). *Empirically based taxonomy: How to use syndromes and profile types derived from the CBCL/4-18, TRF, & YSR.* Burlington: University of Vermont, Department of Psychiatry.

Alicke, M. D., Zerbst, J. I., & LoSchiavo, F. M. (1996). Personal attitudes, constraint magnitude, and correspondence bias. *Basic and Applied Social Psychology, 18,* 211–228.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Anderson, C. A., & Lindsay, J. J. (1998). The development, perseverance, and change of naive theories. *Social Cognition, 16,* 8–30.

Bandura, A. (1992). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Barkley, R. A. (1988). Child behavior rating scales and checklists. In M. Rutter, A. H. Tuna, & I. S. Lann (Eds.), *Assessment and diagnosis in child psychopathology* (pp. 113–155). New York: Guilford Press.

Barkley, R. A., & Edelbrock, C. S. (1987). Assessing situational variation in children's behavior problems: The home and school questionnaires. In R. Prinz (Ed.), *Advances in behavioral assessment of children and families* (Vol. 3, pp. 157–176). Greenwich, CT: JAI Press.

Barrios, B. A. (1988). On the changing nature of behavioral assessment. In A. S. Bellack & M. Hersen (Eds.), *Behavioral assessment: A practical handbook* (3rd ed., pp. 3–41). New York: Pergamon Press.

Block, J. (1995). A contrarion view of the five-factor approach to personality description. *Psychological Bulletin, 117,* 187–215.

Boldizar, J. P., Perry, D. G., & Perry, L. C. (1989). Outcome values and aggression. *Child Development, 60,* 571–579.

Casey, R. J., & Schlosser, S. (1994). Emotional responses to peer praise in children with and without a diagnosed externalizing disorder. *Merrill-Palmer Quarterly, 40,* 60–81.

Chapman, L. J., & Chapman, J. P. (1969). Illusory correlation as an obstacle to the use of valid psychodiagnostic signs. *Journal of Abnormal Psychology, 74,* 271–280.

Christensen-Szalanski, J. J. J., & Beach, L. R. (1982). Experience and the base-rate fallacy. *Organization Behavior and Human Performance, 29,* 270–278.

Coie, J. D., Terry, R., Lenox, K., & Lochman, J. (1995). Childhood peer rejection and aggression as predictors of stable patterns of adolescent disorder. *Development and Psychopathology, 7,* 697–713.

Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17–59). New York: Cambridge University Press.

Cosmides, L., & Tooby, J. (1996). Are humans good intuitive statisticians after all? Rethinking some conclusions from the literature on judgment under uncertainty. *Cognition, 58,* 1–73.

Dawes, R. M., Mirels, H. L., Gold, E., & Donahue, E. (1993). Equating inverse probabilities in implicit personality judgments. *Psychological Science, 4,* 396–400.

Dawson, V. L., Zeitz, C. M., & Wright, J. C. (1989). Expert–novice differences in person perception: Evidence of experts' sensitivities to the organization of behavior. *Social Cognition, 7,* 1–30.

Dodge, K. A., & Coie, J. D. (1987). Social information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53,* 1146–1158.

Dodge, K. A., McClaskey, C. L., & Feldman, E. (1985). A situational approach to the assessment of social competence in children. *Journal of Consulting and Clinical Psychology, 53,* 344–353.

Edelbrock, C., & Achenbach, T. M. (1984). The teacher version of the child behavior profile: I. Boys aged 6–11. *Journal of Consulting and Clinical Psychology, 52,* 207–217.

Eifert, G. H., Evans, I. M., & McKendrick, V. G. (1990). Matching treatments to client problems not diagnostic labels: A case for paradigmatic behavior therapy. *Journal of Behavioral Therapy & Experimental Psychiatry, 21,* 163–172.

Everitt, B. (1980). *Cluster analysis* (2nd ed.). New York: Halsted.

Gresham, F. M., & Noell, G. H. (1993). Issues in classification of childhood psychopathology. In T. R. Kratochwill & R. J. Morris (Eds.), *Handbook of psychotherapy with children and adolescents* (pp. 108–128). Boston: Allyn & Bacon.

Haynes, S. N., & O'Brien, W. H. (1990). Functional analysis in behavior therapy. *Clinical Psychology Review, 10,* 649–668.

Haynes, S. N., & Uchigakiuchi, P. (1993). Incorporating personality trait measures in behavioral assessment: Nuts in a fruitcake or raisins in a Mai Tai? *Behavior Modification, 17,* 72–92.

Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S. (1996). The course of aggression in first-grade children with and without comorbid anxious symptoms. *Journal of Abnormal Child Psychology, 24,* 445–456.

Koehler, J. J. (1996). The base rate fallacy reconsidered: Descriptive, normative, and methodological challenges. *Behavioral and Brain Sciences, 19,* 1–17.

Koerner, K., Kohlenberg, R. J., & Parker, C. R. (1996). Diagnosis of personality disorder: A radical behavioral alternative. *Journal of Consulting and Clinical Psychology, 64,* 1169–1176.

Koot, H. M., & Verhulst, C. (1992). Prediction of children's referral to mental health and special education services from earlier adjustment. *Journal of Child Psychology & Psychiatry & Applied Disciplines, 33,* 717–729.

Ladd, G. W., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/withdrawn children during early grade school. *Child Development, 70,* 910–929.

Ledingham, J. E. (1981). Developmental patterns of aggressive and withdrawn behavior in childhood: A possible method of identifying preschizophrenics. *Journal of Abnormal Child Psychology, 9,* 1–22.

Ledingham, J. E., & Schwartzman, A. E. (1984). A 3-yr follow-up of aggressive and withdrawn behavior in childhood: Preliminary findings. *Journal of Abnormal Child Psychology, 12,* 157–168.

Lewin, K. (1935). *Dynamic theory of personality.* New York: McGraw-Hill.

Lewin, K. (1954). Behavior and development as a function of the total situation. In L. Carmichael (Ed.), *Manual of child psychology* (2nd ed., pp. 918–970). New York: Wiley.

Lyons, J., Serbin, L. A., & Marchessault, K. (1988). The social behavior of peer-identified aggressive, withdrawn, and aggressive/withdrawn children. *Journal of Abnormal Child Psychology, 16,* 539–552.

McConaughy, S. H., & Achenbach, T. M. (1994). Comorbidity of empirically based syndromes in matched general population and clinical samples. *Journal of Child Psychology and Psychiatry, 35,* 1141–1157.

McConaughy, S. H., & Achenbach, T. M. (1996). Contributions of a child interview to multimethod assessment of children with EBD and LD. *School Psychology Review, 25,* 24–39.

McConaughy, S. H., Achenbach, T. M., & Gent, C. L. (1988). Multiaxial empirically based assessment: Parent, teacher, observational, cognitive, and personality correlates of child behavior profile types for 6- to 11-year-old boys. *Journal of Abnormal Child Psychology, 16,* 485–509.

McConaughy, S. H., & Skiba, R. J. (1993). Comorbidity of externalizing and internalizing problems. *School Psychology Review, 22,* 421–436.

McNemar, Q. (1962). *Psychological statistics.* New York: Wiley.

Patterson, G. R. (1982). *Coercive family process: A social learning approach.* Eugene, OR: Castalia.

Patterson, G. R. (1997). Performance models for parenting: A social interactional perspective. In J. E. Grusec & L. Kuczynski (Eds.), *Par-*

enting and children's internalization of values: A handbook of contemporary theory (pp. 193–226). New York: Wiley.

Ross, L., & Nisbett, R. E. (1991). *The person and the situation: Perspectives of social psychology.* New York: McGraw-Hill.

Sameroff, A. J. (1995). General systems theories and developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Vol. 1. Theory and methods* (pp. 659–695). New York: Wiley.

Schwartzman, A. E., Ledingham, J. E., & Serbin, J. E. (1985). Identification of children at risk for adult schizophrenia: A longitudinal study. *International Review of Applied Psychology, 34,* 363–380.

Scotti, J. R., Morris, T. L., McNeil, C. B., & Hawkins, R. P. (1996). *DSM–IV* and disorders of childhood and adolescence: Can structural criteria be functional? *Journal of Consulting and Clinical Psychology, 64,* 1177–1191.

Serbin, L. A., Cooperman, J. M., Peters, P. L., Lehoux, P. M., Stack, D. M., & Schwartzman, A. E. (1998). Intergenerational transfer of psychosocial risk in women with childhood histories of aggression, withdrawal, or aggression and withdrawal. *Developmental Psychology, 34,* 1246–1262.

Shoda, Y., Mischel, W., & Wright, J. C. (1993a). Links between personality judgments and contextualized behavior patterns: Situation–behavior profiles of personality prototypes. *Social Cognition, 11,* 399–429.

Shoda, Y., Mischel, W., & Wright, J. C. (1993b). The role of situational demands and cognitive competencies in behavioral organization and personality coherence. *Journal of Personality and Social Psychology, 65,* 1023–1035.

Shoda, Y., Mischel, W., & Wright, J. C. (1994). Intra-individual stability in the organization and patterning of behavior: Incorporating psychological situations into the idiographic analysis of personality. *Journal of Personality and Social Psychology, 67,* 674–687.

Smith, R. G., & Iwata, B. A. (1997). Antecedent influences on behavior disorders. *Journal of Applied Behavior Analysis, 30,* 343–375.

Stoolmiller, M., Patterson, G. R., & Snyder, J. (1997). Parental discipline and child antisocial behavior: A contingency-based theory and some methodological refinements. *Psychological Inquiry, 8,* 223–229.

Wright, J. C., & Drinkwater, M. (1997). Rationality vs. accuracy of social judgment. *Social Cognition, 15,* 245–273.

Wright, J. C., Lindgren, K. P., & Zakriski, A. L. (2001). Syndromal versus contextualized assessment of childhood psychopathology: Differentiating environmental and dispositional determinants of behavior. Manuscript submitted for publication.

Wright, J. C., & Mischel, W. (1987). A conditional approach to dispositional constructs: The local predictability of social behavior. *Journal of Personality and Social Psychology, 53,* 1159–1177.

Wright, J. C., Zakriski, A. L., & Drinkwater, M. (1999). Childhood psychopathology and the reciprocal patterning of behavior and environment: Distinctive situation–behavior profiles of internalizing, externalizing, and mixed-syndrome children. *Journal of Consulting and Clinical Psychology, 67,* 95–107.

Received March 22, 2000
Revision received November 21, 2000
Accepted November 28, 2000 ■

Call for Nominations

The Publications and Communications Board has opened nominations for the editorships of ***Journal of Experimental Psychology: Animal Behavior Processes, Journal of Personality and Social Psychology: Personality Processes and Individual Differences, Journal of Family Psychology, Psychological Assessment,*** and ***Psychology and Aging*** for the years 2004–2009. Mark E. Bouton, PhD, Ed Diener, PhD, Ross D. Parke, PhD, Stephen N. Haynes, PhD, and Leah L. Light, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 2003 to prepare for issues published in 2004. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

Search chairs have been appointed as follows:

- Lucia A. Gilbert, PhD, and Linda P. Spear, PhD, for ***JEP: Animal***
- Sara Kiesler, PhD, for ***JPSP: PPID***
- Susan H. McDaniel , PhD, and Mark I. Appelbaum, PhD, for the ***Journal of Family Psychology***
- Lauren B. Resnick, EdD, for ***Psychological Assessment***
- Randi C. Martin, PhD, and Joseph J. Campos, PhD, for ***Psychology and Aging***

To nominate candidates, prepare a statement of one page or less in support of each candidate. Address all nominations to the appropriate search committee at the following address:

Karen Sellman, P&C Board Search Liaison
Room 2004
American Psychological Association
750 First Street, NE
Washington, DC 20002-4242

The first review of nominations will begin December 14, 2001.