

FUNCTIONAL ANALYSIS OF SEPARATE TOPOGRAPHIES OF ABERRANT BEHAVIOR

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We conducted a functional analysis of distinct topographies of aberrant behavior displayed by 4 clients. We first analyzed the behaviors in an aggregate fashion and then separated the behaviors to formulate hypotheses about the maintaining variables for each behavior. The procedures were used in a two-phase experiment. During Phase 1, two extended functional analyses were completed, one in an inpatient unit and one in a special education classroom. During Phase 2, two brief functional analyses were completed in an outpatient clinic. Results indicated that hypotheses of separate functions for distinct behaviors can be generated using both extended and brief functional analyses when the results are graphed in the aggregate and are separated by response topography. The results also suggest that these methods can improve the accuracy of data interpretation and treatment selection.

DESCRIPTORS: aberrant behavior, functional analysis, multiple topographies, response class, brief functional analysis

To date, most studies of functional analysis have focused on single functions that maintain one or more aberrant responses (Carr & Durand, 1985; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; Iwata, Pace, Kalsher, Cowdery, & Cataldo, 1990; Northrup et al., 1991; Wacker et al., 1990). In these cases, the likely assumption is that separate topographies of behavior are, in fact, members of the same functional response class; that is, they are maintained by the same reinforcers. In many cases, this assumption is validated by the effectiveness of subsequent treatment. At least occasionally, however, multiple functions of distinct topographies of aberrant behavior have disrupted the analysis of those behaviors.

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This type of problem was demonstrated by Day, Rea, Schussler, Larson, and Johnson (1988), who reported that the occurrence of other forms of aberrant responses interfered with their functional analysis of self-injurious behavior (SIB) displayed by 1 child. Day et al. discontinued their analysis of the effects of negative reinforcement and sensory deprivation on self-injury because the boy began to engage in aggressive behavior when negative reinforcement contingencies were in place, and disruptive behaviors occurred when he was left alone. In this case, the occurrence of multiple topographies of target behavior maintained by different functions may have compromised the assessment.

Although the existence of different topographies of behavior serving different functions for a single client has been noted in the literature (Durand, 1982; Mace, Page, Ivancic, & O'Brien, 1986; Slifer, Ivancic, Parrish, Page, & Burgio, 1986; Smith, Iwata, Vollmer, & Pace, 1992; Sturmey, Carlsen, Crisp, & Newton, 1988), it is still common to combine separate topographies of aberrant behavior and to conduct one functional analysis on an aggregate class of target behavior (Durand & Carr, 1991; Wacker et al., 1990). In some cases, combining topographies may be necessary due to the number of behaviors displayed by a given client.

In addition, conducting separate functional analyses for several distinct topographies of aberrant behavior is costly and time consuming. Thus, unless preliminary information (e.g., a descriptive assessment) suggests the possibility of separate functions for different topographies, it often makes pragmatic sense to conduct a single analysis on all behaviors.

If separate functions are hypothesized, then separate functional analyses of each behavior are warranted and easily constructed (Mace *et al.*, 1986). Mace *et al.* used an extended functional analysis to evaluate the effects of adult attention and escape from task demands on disruption and aggression displayed by a 12-year-old boy. They reported that disruptive behavior was maintained by negative reinforcement in the form of escape from demanding tasks, but aggression was maintained by positive reinforcement in the form of social attention.

In other cases, one topography of behavior may be omitted from a functional analysis because it is assumed to have a given function. For example, stereotypy is often assumed to serve an automatic function (Lovaas, Newsom, & Hickman, 1987), even though previous studies have shown that it may be maintained by other functions (Durand & Carr, 1987). The potential difficulty with an aggregate analysis, in which multiple topographies are considered as one class of behavior, and with an analysis that ignores one or more topographies of aberrant behavior is that treatment may not match the function of all target behaviors and may disrupt the effects of treatment. Thus, when possible, separate analyses for each behavior, as described by Mace *et al.* (1986), are warranted.

A slightly different approach, based on Mace *et al.* (1986), is to graph all presenting target behaviors in an aggregate fashion initially and then to analyze each topography of behavior on separate graphs. This approach offers the practical advantage of conducting a single functional analysis, but separating each topography also allows investigators to generate specific hypotheses about the function of each behavior. Depending on the results, separate functional analyses can then be conducted to identify the separate functions further, or treatment can

be initiated, if warranted, based on the preliminary analysis.

To assess the applicability of this assessment approach, two extended (Phase 1) and two brief functional analyses (Phase 2) (Northup *et al.*, 1991) were conducted in this investigation. For all four analyses, the clients displayed at least two topographies of aberrant behavior, but there were no definitive hypotheses that the topographies were maintained by different functions. Thus, we conducted a single functional analysis on all target behavior, and analyzed our results in both an aggregate fashion and on each topography. We used the analyses to generate hypotheses regarding the possibility that each behavior served distinct functions. Brief, as well as more extended, analyses were conducted to determine if they are useful for analyzing multiple functions.

METHOD

Participants and Setting

Phase 1. Participants were the 1st client referred to a specialized inpatient service for clients with aberrant behavior (Ray) and the 1st client referred to an ongoing classroom-based research project (Minnie) who displayed at least two distinct topographies of aberrant behavior. Ray was a 23-year-old man diagnosed with severe to profound mental retardation and quadriplegia who was referred for assessment of self-injury and stereotypy. His evaluation was completed in a special education classroom located on an inpatient unit that was equipped with a one-way mirror for unobtrusive observation; no other clients were present during the evaluation.

Minnie was a 6-year-old girl diagnosed with severe to profound mental retardation, microcephaly, seizures, and cortical blindness who was referred to assessment of self-injury, stereotypy, and aggression. Her evaluation was conducted as part of an ongoing community-based research project and was completed in her special education classroom located at an urban elementary school. During Min-

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nie's analysis, the classroom teacher and the experimenters worked one-on-one with her while other students received instruction in another part of the classroom.

Phase 2. Participants were 2 clients referred to a specialized outpatient service for individuals with self-injurious and aggressive behavior who displayed at least two distinct topographies of aberrant behavior. Jenny was a 28-year-old woman diagnosed with moderate to severe mental retardation and Down Syndrome who was referred for assessment of stereotypy, aggression, and self-injury. Mike was a 12-year-old boy diagnosed with mild to moderate mental retardation, Down Syndrome, and microcephaly who was referred for assessment of self-injury and aggression.

The evaluations in Phase 2 were conducted in the same classroom described for Ray in Phase 1; no other clients were present during the evaluations. Jenny's evaluation involved an additional probe assessment conducted in the living room of her group home. This probe was conducted by the examiners and was videotaped by the group-home staff; no other residents were present.

Measurement

Response definitions. The six dependent variables recorded for each participant were (a) self-injury, (b) stereotypy, (c) aggression, (d) other inappropriate behavior, (e) manding, and (f) other appropriate behavior. *Self-injury*, defined as any behavior that resulted in self-inflicted tissue damage, was displayed by Ray (arm hitting, head banging, and arm biting) and Minnie (arm biting and eye poking), and was reported by interview to be displayed by Jenny (hand biting) but was not observed during our analysis. *Stereotypic behavior*, defined as any repetitive, rhythmical, noninjurious behavior, was displayed by Ray (body rocking and hand rubbing), Minnie (hand mouthing), and Jenny (nasal snorting, hair fingering, and taking glasses off and on). *Aggression*, defined as any behavior that was physically harmful to others, was displayed by Jenny (grabbing and pushing) and Mike (pushing, grabbing, and kicking), and was reported by

interview to be displayed by Minnie (pinching and biting) but was not observed during our analysis. *Other inappropriate behavior* included noncompliance, screaming, and destruction. Although other aberrant behaviors were subject to the contingencies in place during the analysis, they rarely occurred and were deleted from the analysis. *Manding* was defined as any prompted or unprompted oral word (Jenny) or activation of a communication board (Mike) to request a break from tasks or to gain social attention. *Other appropriate behavior* included being on task during work activities (Minnie, Jenny, Mike), interacting with the therapist during play (Minnie, Jenny, Mike), actively engaging with a preferred activity during play (Minnie, Jenny, Mike), or sitting in a chair when left alone (Ray, Minnie, Jenny, Mike).

Data collection. For both phases, data were collected using a 6-s partial-interval recording system. For Ray, Jenny, and Mike, the experimenters observed the evaluation through the one-way mirror adjoining the classroom. During each 6-s interval, all occurrences of client behaviors were recorded. (Operational definitions of therapist behavior and procedural integrity data are available on request from the first author.) A tape recorder signaled the end of each 6-s interval. During Minnie's analysis, sessions were videotaped and later recorded by two independent observers using a similar 6-s partial-interval recording system. During Jenny's in-home probe assessment, data were collected in vivo.

Interobserver agreement. For Phase 1, two observers simultaneously but independently scored subject responses during 30 sessions (88%). Interobserver agreement for the presence of behavior was computed by dividing agreements by agreements plus disagreements and multiplying by 100%. An agreement was defined as an interval in which both observers recorded an occurrence of the same target response (e.g., SIB). Intervals in which both observers scored the absence of a response were excluded from the analysis to avoid spuriously high reliability estimates. Average interobserver agreement for client behavior was 95% for both Ray

and Minnie, and ranged from 82% to 100% across sessions for both clients.

For Phase 2, two observers simultaneously but independently scored subject responses during 13 sessions (68%). Interobserver agreement was calculated in the same manner described in Phase 1. Average agreement for client behavior was 84% for Jenny and 91% for Mike, and ranged from 72% to 100% across sessions for both clients.

Design and General Procedures

For Phase 1, we conducted an extended functional analysis within a multielement design (Barlow & Hersen, 1984). For Phase 2, we conducted brief functional analyses (Northup *et al.*, 1991) with a multielement design that consisted of a series of rapidly changing assessment conditions. Phase 2 analyses included contingency reversals in which an identified maintaining contingency for aberrant behavior was provided for appropriate behavior such as manding. These conditions occurred either immediately after the initial analysis of aberrant behavior (Jenny) or were incorporated into the analysis of aberrant behavior (Mike).

Prior to each evaluation, hypotheses were formulated by the clinic or research teams about the maintaining conditions for each aberrant behavior, based on information from surveys and phone contacts with the care providers (for a more detailed description of how preassessment hypotheses were generated in the clinic, see Wacker & Steege, 1993). Ray's evaluation was completed over 4 days, with 4 to 10 sessions completed per day. Minnie's evaluation was completed in 1 day. The same general assessment procedures used during Phase 1 were used during Phase 2. Each brief functional analysis began with the team escorting the client to the classroom for a 90-min evaluation, based on the procedures described by Northup *et al.* (1991); all assessment sessions lasted for 5 to 10 min.

Specific Assessment Procedures

Control conditions. The two types of control conditions were (a) diverted attention/ignore and (b) noncontingent attention. During the diverted

attention/ignore condition, the client was seated at a table with care providers and clinic staff and was told to wait while clinic staff interviewed the care providers. All behaviors, aberrant and appropriate, were ignored. Given the absence of either demands or contingent attention, this condition was intended to control for both positive and negative reinforcement for clients who willingly waited at the table.

The noncontingent attention condition occurred when staff provided noncontingent attention to the client during free play. They provided the client with a variety of toys or preferred materials, maintained continuous contact with the client through either verbal interaction or engagement in a play activity, and permitted the client to engage in any available activity. All aberrant behavior was ignored. We used this condition for clients who did not willingly sit at the table and for clients whose aberrant behavior was hypothesized (based on preassessment information) to be maintained by sensory reinforcement.

Sensory reinforcement. Three sensory reinforcement conditions were used if aberrant behavior was hypothesized to serve a sensory (i.e., automatic) reinforcement function: (a) diverted attention/ignore (described previously), (b) alone, and (c) high sensory. During the alone condition, we instructed the client to wait alone in the classroom, and no further interaction occurred throughout the remainder of the condition. If aberrant behavior increased during the diverted attention/ignore or alone conditions, sensory induction was the hypothesized maintaining contingency for aberrant behavior.

The high-sensory condition exposed clients to noncontingent, loud, and constant noise, such as a radio and television playing at high volume. Staff ignored all client behaviors. This condition represented chaotic times, such as transition times at school. If an increased occurrence of aberrant behavior was observed during this condition, the hypothesized maintaining contingency was sensory reduction.

Positive reinforcement. Positive social reinforcement was assessed using two conditions: (a) social attention and (b) tangible. During the social at-

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attention condition, no demands were placed on the client, and toys were removed. The therapist maintained a proximity of 1.5 to 3 m to the client but ignored him or her unless aberrant behavior occurred. When aberrant behavior was displayed, the therapist provided contingent social contact in the form of verbal reprimands for 15 to 20 s, or until aberrant behavior stopped.

For the tangible condition, we placed a presumed preferred toy in view of the client and ignored the client unless aberrant behavior occurred. When aberrant behavior occurred, we provided the client with the preferred toy for 15 to 20 s, or until aberrant behavior stopped. We selected this condition if previously obtained information indicated that the client was provided with access to preferred items in order to redirect or pacify him or her when aberrant behaviors occurred.

Negative reinforcement. We assessed two negative reinforcement conditions: (a) escape from task and (b) escape from high sensory. During the escape-task condition, we presented the client with a demanding educational or vocational activity using a three-step prompt sequence: (a) verbal instruction, (b) visual modeling of the task, and (c) hand-over-hand guided compliance. For all clients, each step of the prompting sequence was needed for each task demand. No praise or positive attention was provided. The tasks were presented at a continuous rate throughout the condition. Clients received a break for 15 to 30 s from the task contingent on the occurrence of aberrant behavior. During the break, the task was removed and the therapist turned away from the client.

During the escape-high-sensory condition, we exposed clients to loud, constant noise in the form of a radio and television playing at high volume, often augmented by loud vocalizations by the therapists. When a client engaged in aberrant behavior, all sources of stimulation were turned off or down (i.e., the radio and television were turned off and the therapists lowered their voices to a conversational level) for at least 15 to 20 s, or until aberrant behavior stopped.

Contingency reversal. Contingency reversals were

conducted for both Jenny and Mike in Phase 2. During the contingency reversal, the consequence identified as maintaining aberrant behavior during the initial assessment was provided contingent on appropriate behavior. Three types of contingency reversals, one each for automatic reinforcement, positive reinforcement, and negative reinforcement, were completed. For aberrant behavior maintained by automatic reinforcement, we provided the clients (based on their selection) with a preferred work task that could be completed independently (alone task). We selected tasks that required topographies incompatible with aberrant behavior, based on the assumption that having a preferred work task to complete would increase appropriate behavior and decrease behaviors maintained by automatic reinforcement.

For aberrant behavior maintained by positive reinforcement, we provided the positive reinforcer contingent on appropriate behavior (e.g., manding). We maintained a proximity of 1.5 to 3 m to the client and delivered social attention and preferred activities contingent on the occurrence of manding behaviors (differential reinforcement of communication—DRC) or for any behavior other than those identified as aberrant (differential reinforcement of other behavior—DRO). When aberrant behavior was displayed, we turned away from the client until the behavior no longer occurred. Following 5 to 10 s of appropriate behavior, we prompted the client to display the targeted mand and provided the client with social attention for 15 to 20 s. Following social attention, the client was again prompted to display the mand to continue social contact. Between prompts to mand, we verbally praised the client for any behavior other than aberrant responses.

For aberrant behavior maintained by negative reinforcement, the client was presented with a demanding task, and, following 15 to 30 s of appropriate task completion, the examiners provided a brief break (DRO) or verbally prompted the client to mand (DRC) for a break. Breaks lasted for approximately 30 s, and, during the break, the examiners provided the client with individual social

attention. Following the break, the examiners prompted the client to display the mand to stay on break. The client was redirected to the task contingent on the occurrence of aberrant behavior or the absence of the mand.

RESULTS AND DISCUSSION

Phase 1

The results of Ray's analysis are presented in Figure 1. Aggregate aberrant behavior displayed an undifferentiated pattern across conditions, with the lowest level occurring during the social attention conditions. When self-injury and stereotypy were analyzed separately, self-injury was shown to increase during the attention condition, leading us to hypothesize a positive reinforcement function. The opposite pattern occurred for stereotypy. Stereotypy increased during high-sensory, escape-high-sensory, and diverted attention/ignore conditions, and occurred least often during the social attention condition. This pattern of behavior led us to hypothesize an automatic or sensory function.

The results of Minnie's analysis are presented in Figure 2. Aggregate aberrant behavior increased during the diverted attention/ignore condition, suggesting that aggregate aberrant behavior served a sensory reinforcement function. When self-injury was analyzed separately, the highest level of self-injury was seen to occur during the escape-task condition, suggesting that self-injury may have served a negative reinforcement function. However, self-injury increased in only two of three escape-task conditions, thus requiring a conservative interpretation of these data. When stereotypy was analyzed separately, stereotypy was seen to display an increased occurrence during the diverted attention/ignore condition, leading us to hypothesize an automatic or sensory reinforcement function.

For both Ray and Minnie, stereotypy occurred at a higher level than self-injury. Thus, the function of self-injury was masked when aberrant behavior was analyzed in an aggregate fashion. Given the aggregate analysis, treatment would have been based on a sensory function. Given the results of the separate analysis, it seems unlikely that an effective

treatment would have been selected for the more severe behaviors of self-injury for either client.

Phase 2

The results of Jenny's analyses are shown in Figure 3. During Jenny's initial assessment, an undifferentiated pattern of responding occurred when the results of stereotypy and aggression were combined. When stereotypy and aggression were analyzed separately, an increase in stereotypy was seen during all conditions except the escape-task condition, leading us to hypothesize that stereotypy served an automatic or sensory reinforcement function. The opposite pattern occurred for aggression, which increased during the escape-task condition, leading us to hypothesize that aggression served a negative reinforcement function.

To probe possible treatments, contingency reversals were conducted in the outpatient clinic and during an in-home assessment probe conducted 1 week after Jenny's outpatient evaluation. During the escape-task condition, she was given the same demanding task as for the initial escape assessment, but this time she received a 15- to 30-s break for manding (verbally stating "break"). Jenny requested a break during 8% of the intervals, and aggression decreased substantially. During the alone task condition, the presentation of a preferred work task decreased stereotypy substantially. When these two contingency reversal conditions were assessed in her home, similar results occurred. Given the results of this assessment, we recommended to group-home staff that they teach Jenny to request breaks to reduce aggression during required work times and give her preferred work tasks to reduce stereotypy during alone times.

Mike's aggregate analysis (Figure 4, top) showed that he displayed aberrant behavior during the diverted attention/ignore, social attention, and escape-task conditions, which might lead one to conclude that these behaviors were maintained by automatic reinforcement. When self-injury and aggression were analyzed separately and in conjunction with the contingency reversal conditions, other hypotheses were generated. Self-injury increased during both the diverted attention/ignore and so-

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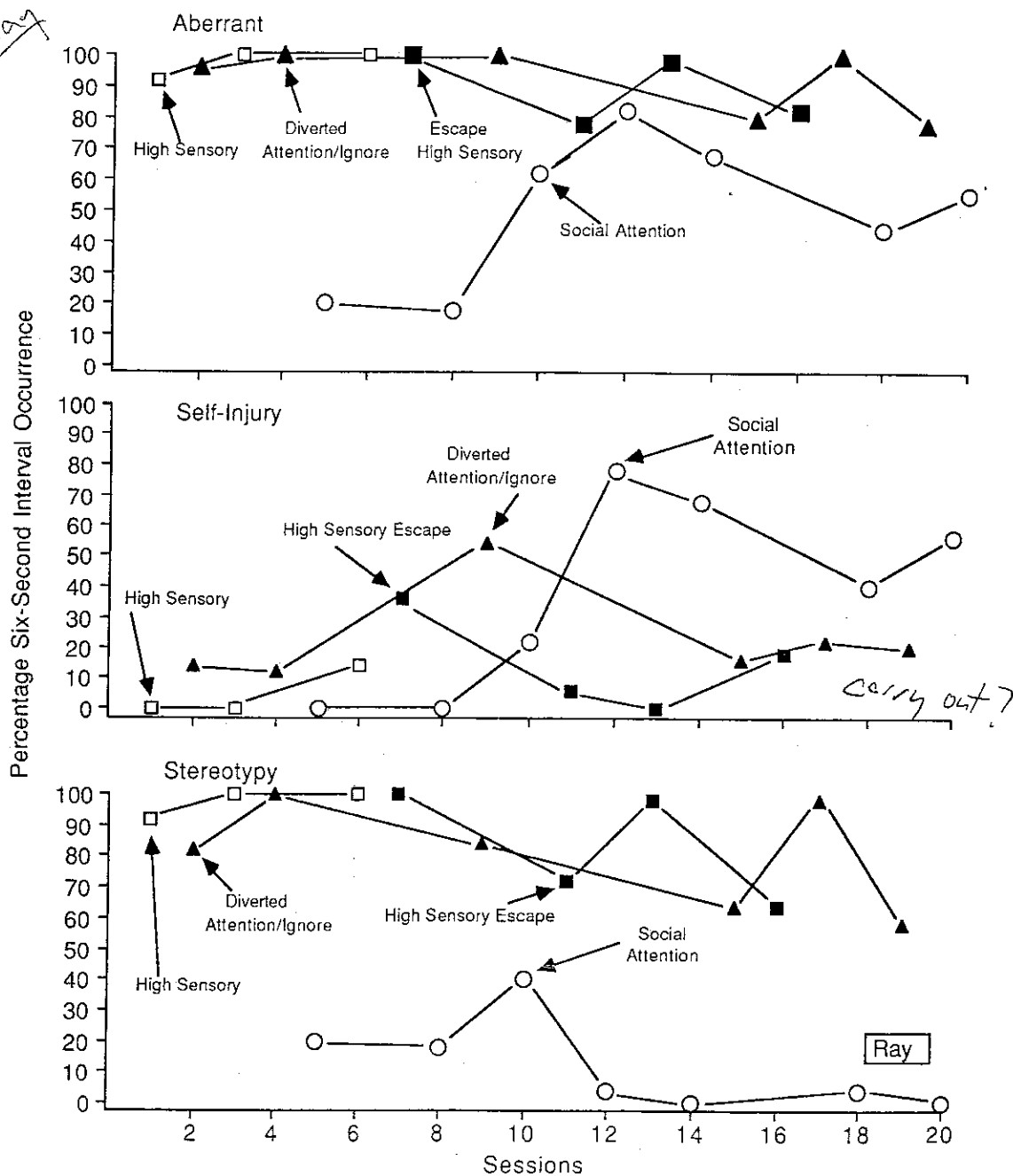


Figure 1. Functional analysis results for aggregate aberrant behavior (top) and self-injurious and stereotypic behaviors for Ray.

social attention conditions, suggesting either an automatic or a positive reinforcement function. Aggression occurred during both the social attention and escape-task conditions, suggesting either a positive or a negative reinforcement function. Thus, in

Mike's case, attention appeared to be a maintaining variable for both behaviors, but each also appeared to have a separate maintaining contingency.

Possible treatments were probed in the social attention and escape-task conditions with Mike. In

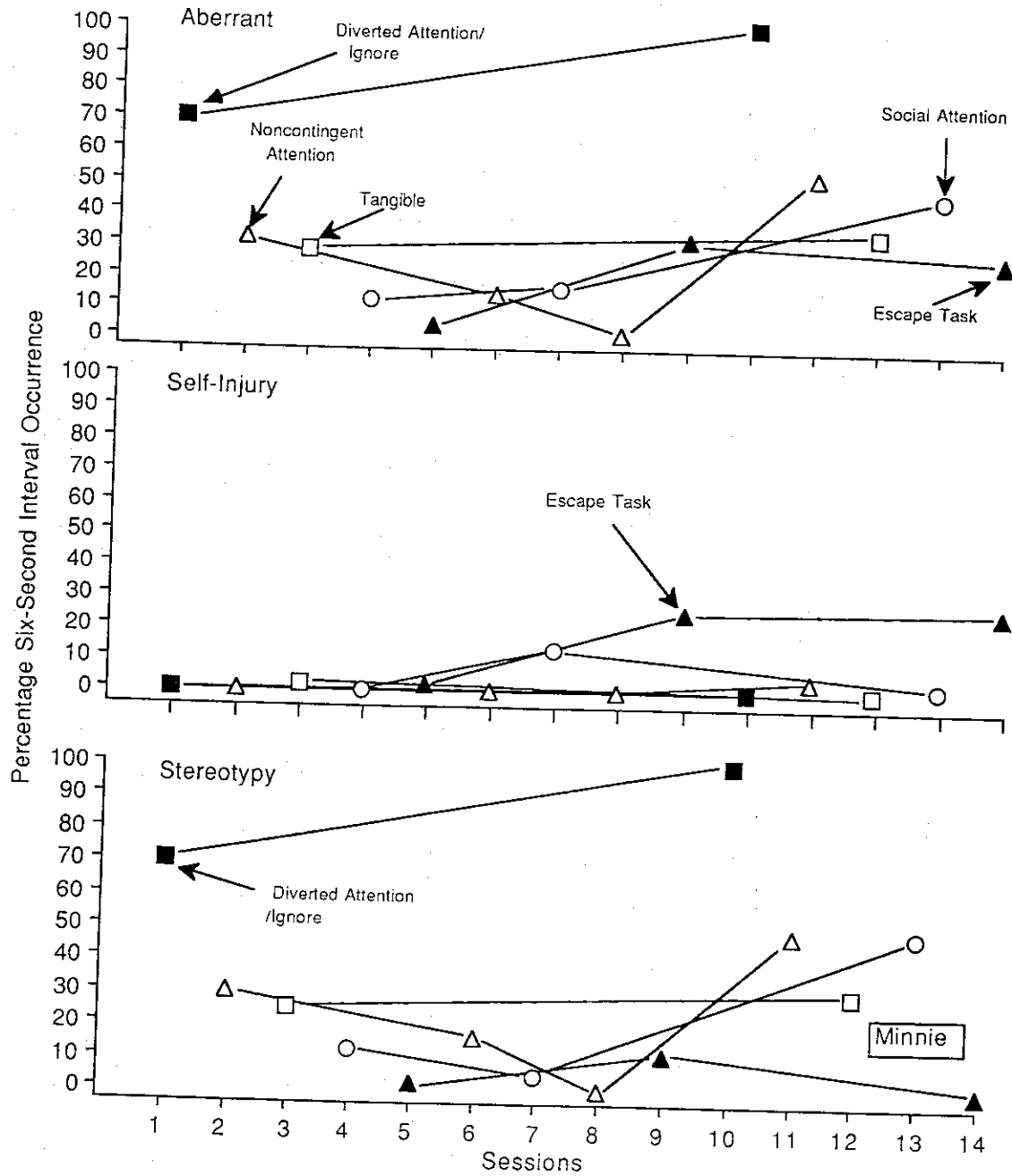


Figure 2. Functional analysis results for aggregate aberrant behavior (top) and self-injurious and stereotypic behaviors for Minnie.

the social attention DRC/DRO condition, in which Mike received therapist attention through manding or appropriate behavior only, the targeted mand increased to 47% of the intervals, with a simultaneous decrease in both self-injury and aggression to near zero. Given these results, it appeared that

contingent social attention would be an essential component of an effective treatment for decreasing self-injury and aggression and increasing appropriate alternative behaviors. In the escape-task DRC/DRO condition, when Mike received short breaks from work for manding or task completion, the

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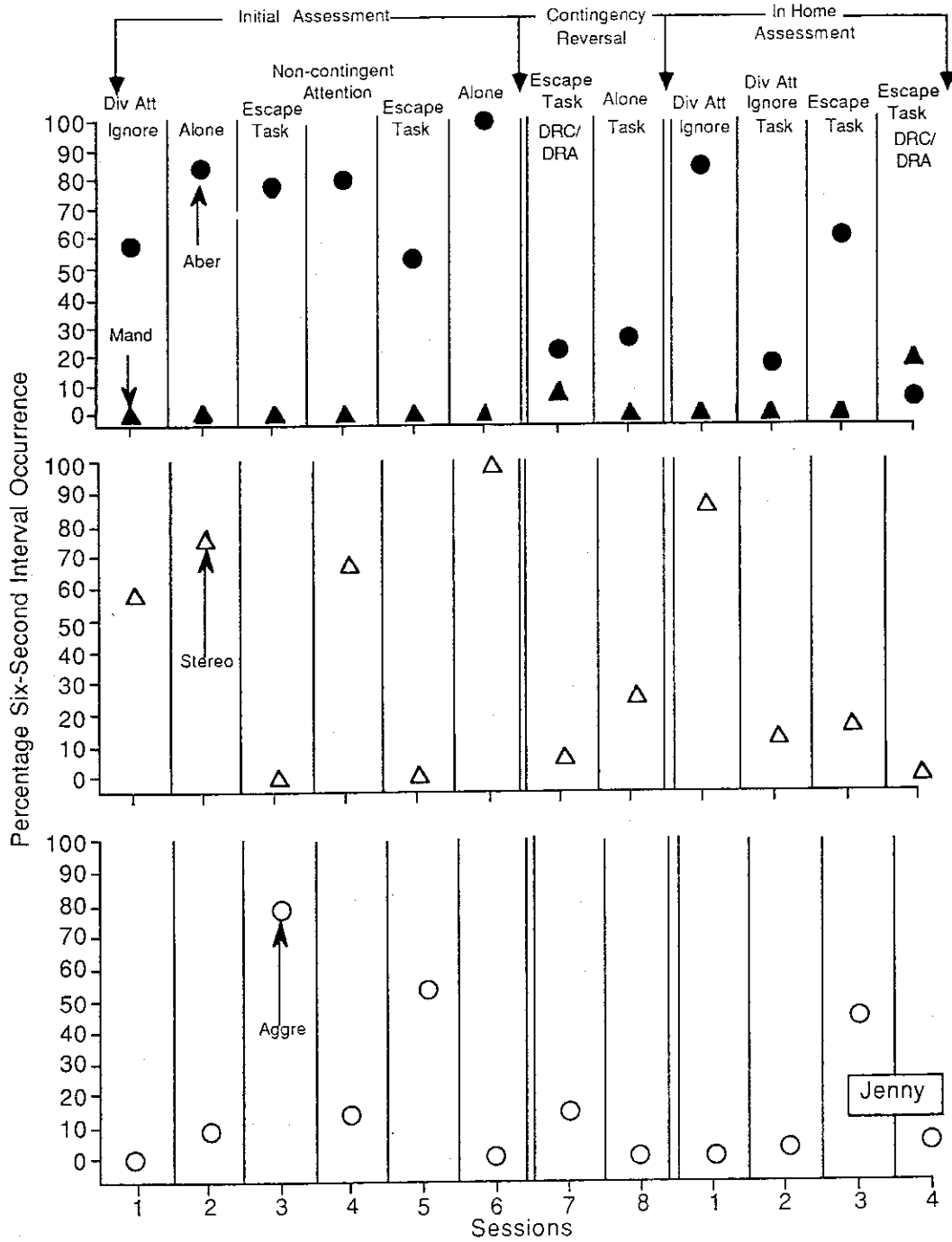


Figure 3. Functional analysis results for aggregate aberrant behavior (top) and stereotypic and aggressive behaviors for Jenny.

targeted mand increased to an average of 52% of the intervals, and aggressive behavior decreased to near zero. Thus, the use of negative reinforcement during treatment also appeared to be necessary to

replace aggression with appropriate alternative behavior. Our recommendation to the parent was to provide breaks for manding (DRC) and to provide ongoing attention during the break for the absence

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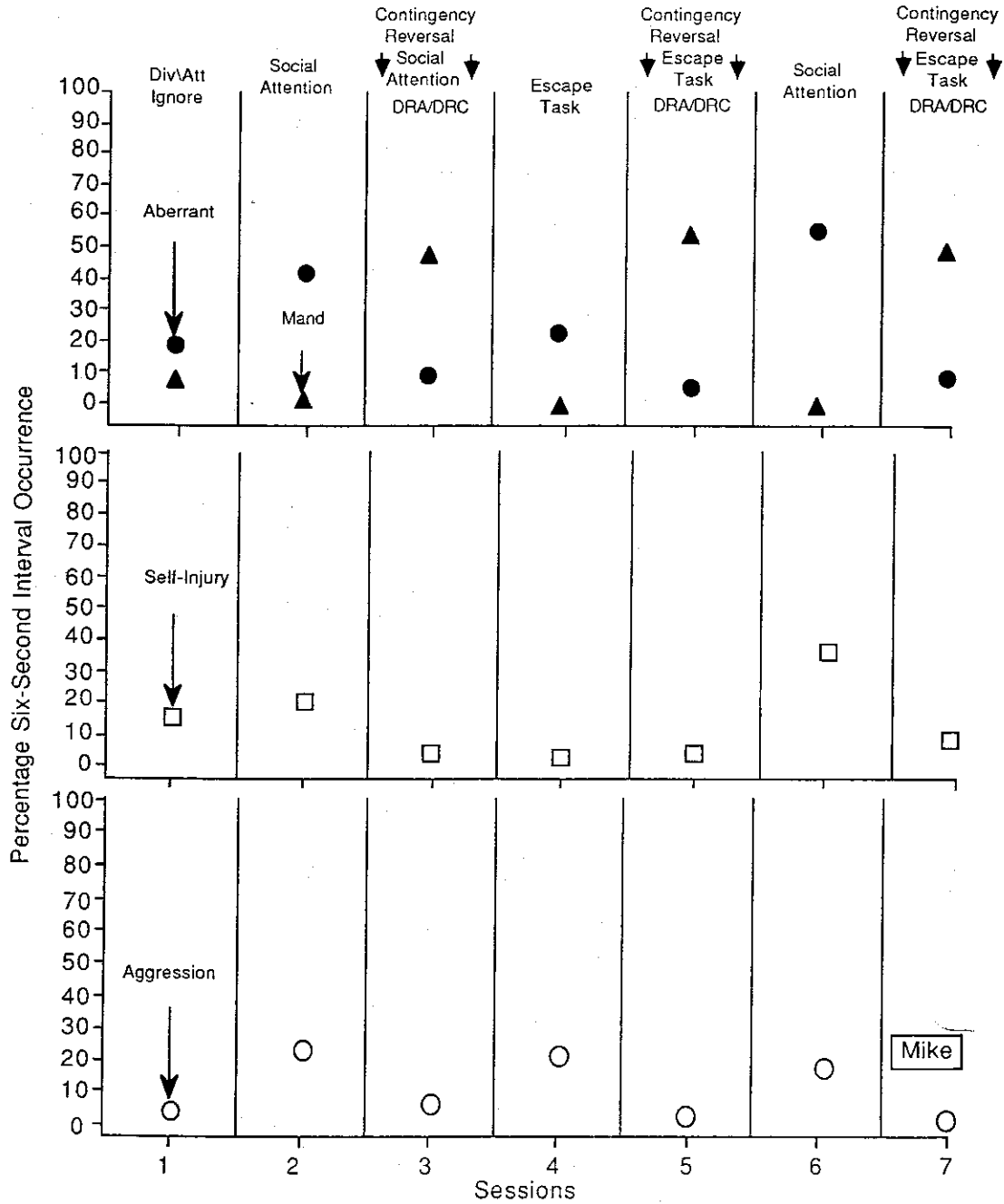


Figure 4. Functional analysis results for aggregate aberrant behavior (top) and self-injurious and aggressive behaviors for Mike.

of aberrant behavior (DRO). However, it also might have been useful to probe whether the provision of a preferred work task would have reduced self-injury in the diverted attention/ignore condition, given the hypothesis that self-injury was maintained by automatic reinforcement in this condition.

GENERAL DISCUSSION

In this investigation, we used both extended (Iwata *et al.*, 1982; Mace *et al.*, 1986) and brief (Northup *et al.*, 1991) functional analyses to analyze the functions of distinct topographies of ab-

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errant behavior. The results for Jenny are perhaps the best example of how separate functions can be hidden by an aggregate analysis, but can be identified when the results for each target behavior are plotted separately. When each topography of behavior was analyzed separately, a distinct function was identified for each response. Conversely, an undifferentiated pattern was seen in the aggregate analysis, because each behavior was maintained by a separate function. When one response was elevated within an assessment condition, the other was suppressed. Undifferentiated patterns of responding can lead to the inference that behavior is maintained by an automatic or biological function (Mace, 1992). In this case, that inference was incorrect because two functionally distinct responses were aggregated into one response category.

Overall, the results show that when multiple target behaviors are displayed, aggregate analyses must be interpreted with caution, especially if the results appear to be undifferentiated. In investigations that have reported separate analyses across two or more topographies (Durand, 1982; Mace et al., 1986; Slifer et al., 1986; Smith et al., 1992; Sturmey et al., 1988), separate functions were identified. Given that treatments tend to be more effective when matched to the results of a preceding functional analysis (Iwata et al., 1990), it is important that the most precise analysis possible be conducted.

In some cases, as shown recently by Smith et al. (1992), the precision of a functional analysis may be enhanced through inclusion of behaviors that are not, by definition, aberrant (e.g., self-restraint). In these cases, the presence or absence of alternative responses needs to be evaluated to determine whether their presence modifies the rate or function of the aberrant response. This finding of one behavior modifying another was also possible for Ray, Minnie, and Jenny. In their analyses, stereotypy received the same consequence as the other aberrant response (self-injury or aggression), and, because stereotypy occurred at the higher rate, the function of the second aberrant response was missed in the aggregate analysis and was possibly modified in the separate analysis. In future studies, it would be of interest to conduct the functional analysis using the

methodology of Smith et al. (1992) to include two additional conditions—one in which stereotypy is ignored and one in which it is neutrally blocked.

Overall, our results suggest that both extended and brief functional analyses can assist researchers and practitioners in assessing the function(s) of distinct topographies of a client's aberrant behavior. Brief assessments may be most useful for generating hypotheses about the probability of distinct functions in situations in which (a) a large number of target responses occur, (b) there are no definitive hypotheses about the possibility of separate functions for each topography, and (c) assessment time is limited. In these situations, the use of descriptive assessments also may be useful for selecting the initial assessment conditions (Mace & Lalli, 1991).

The approach used in this investigation involved the application of functional-analytic contingencies to all major topographies of aberrant behavior and then graphing the data both in the aggregate and separated by topography. One practical advantage of this approach is that the functional analysis can be initiated immediately, and the preliminary results can be used to determine whether separate functional analyses are warranted for designated target behaviors (Mace et al., 1986). The results for Mike, for example, certainly warrant further analysis, and the relatively few data points obtained for Minnie also suggest cautious interpretation. However, if proper caution is used, the results for all 4 clients provide more definitive hypotheses about the function of each topography than were available prior to evaluation or than were available via the aggregate analysis. In addition, all target behaviors were at least briefly assessed, permitting the clinician or researcher to make an empirical decision regarding whether to continue evaluating a given behavior. For Minnie, as an example, the results suggested that further assessment would be warranted for self-injury but not for stereotypy. With a more focused analysis of a behavior like self-injury, it would also be possible to assess whether specific forms of the behavior (e.g., arm biting, eye poking) have separate operant functions.

The overall results suggest that when multiple topographies of aberrant behavior occur, it may be prudent to assess whether the responses serve dif-

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ferent functions. From a treatment standpoint, this is important because the treatment for one behavior might inadvertently reinforce the occurrence of another aberrant response. For example, if contingent time-out is used to decrease the occurrence of attention-maintained aggression, and self-injury serves a sensory stimulation function, then self-injury may increase during the initial sessions of treatment when time-out is used. If the functions of both responses are known, a different treatment would likely be selected. From a procedural standpoint, if interpreted cautiously, both the extended and brief analyses appear to be useful for screening for the possibility of multiple functions. From a conceptual standpoint, the results of extended analyses of multiple functions are of interest for at least two reasons. First, the operant basis for multiple topographies of aberrant behavior can be better described. Second, such an analysis might facilitate our understanding of functional response classes that involve multiple aberrant responses.

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