

*A PRELIMINARY ANALYSIS OF THE EFFECTS OF
PRIOR CLASSROOM CONDITIONS ON PERFORMANCE
UNDER ANALOGUE ANALYSIS CONDITIONS*

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We systematically manipulated two prior classroom conditions to explore their effects on performance under analogue assessments for a 7-year-old girl with severe intellectual disabilities who exhibited aggressive behavior. Results demonstrated consistently higher levels of aggression during demand analogue conditions when they were preceded by one of the classroom conditions.

DESCRIPTORS: aggression, functional analysis, intellectual disability

Certain antecedent operations or conditions may influence subsequent responding under controlled stimulus conditions. Establishing operations, for example, may determine the extent to which a stimulus is reinforcing or punishing at a given point in time (Michael, 1982). Also, the density of reinforcement for a behavior can influence the probability of performance of that behavior under subsequent stimulus conditions (Mace & Wacker, 1994). Traditional analogue analysis techniques for examining the function of challenging behavior can control for the effects of temporally immediate antecedent and consequent stimuli. The effects of operations prior to the analogue analysis may influence performance under controlled analogue conditions. Little research has examined this proposal (O'Reilly, 1995). In this study, classroom conditions prior to analogue analyses were manipulated. A systematic analysis of the influence of prior classroom conditions on temporally proximal

stimulus–response relations during functional analysis conditions was therefore possible.

METHOD

Participant, Settings, and Target Behaviors

Saoirse, a 7-year-old female student with a diagnosis of severe intellectual disabilities, participated in the study. She had limited expressive language (one- to two-word utterances) and could generally understand familiar one-step directions. The research was conducted in the student's special education classroom and in a room adjacent to the classroom. Saoirse was referred for treatment because she exhibited aggressive behavior (pinching, biting, hitting, scratching) toward students and staff. Structured interviews with the teaching staff and observation of Saoirse in the classroom over a 2-week period yielded two hypotheses regarding the occurrence of her aggression: (a) positive reinforcement by social attention and (b) negative reinforcement by escape from demands.

Classroom Instruction

Each morning immediately prior to analogue analysis, the teacher engaged Saoirse and one other classroom student (with no history of challenging behavior) in one of

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two predetermined conditions for a minimum of 20 min. All attempts at aggression by Saoirse toward the other student were blocked by the teacher. One of the following conditions was conducted each day, and the teacher was trained to reliably implement these conditions prior to the study.

Classroom demand. The teacher instructed Saoirse (least-to-most prompt hierarchy) in a series of self-care and hygiene tasks that Saoirse had difficulty completing. Meanwhile, age-appropriate toys were made available to the other student, but no instructions or attention were delivered to that student. Instruction was discontinued for a minimum of 10 s when aggression occurred and was immediately reinstated following this delay or when aggression stopped.

Classroom attention. Conditions mirrored those of the classroom demand condition with the exception that instruction was delivered to the other student while Saoirse played with the toys. In addition, if Saoirse showed aggression toward the teacher or student, she was reprimanded by the teacher for a minimum of 10 s and redirected to the toys.

Analogue Analysis

Immediately following one of the classroom conditions, Saoirse was escorted to the adjacent room where the analogue analysis was conducted. Three conditions were used to test the reinforcement hypotheses. Six analogue sessions (two of each of the three conditions) were implemented following each classroom instruction condition. Analogue sessions lasted 10 min with a 5-min break between sessions.

During the attention condition, Saoirse was present in a room with the therapist (a graduate student in psychology trained to implement the protocol). Age-appropriate toys were available but no particular tasks were provided. The therapist remained approximately 3 m from Saoirse and provided

verbal reprimands for approximately 10 s contingent on the occurrence of aggression. During the demand condition, a series of two functional tasks that Saoirse had difficulty completing were presented in random order by the therapist. Instruction was discontinued for 10 s following aggression but was immediately reinstated following this delay or when aggression stopped. The play condition mirrored the attention condition with the exception that the therapist maintained a closer proximity and played with Saoirse while verbally interacting with her every 5 s.

Two graduate students in psychology were trained to record aggression using a 10-s partial-interval procedure. Interobserver agreement was calculated on a point-by-point basis as total number of agreements divided by agreements plus disagreements multiplied by 100%. Mean agreements on occurrence of aggression, assessed during 50% of the classroom sessions and 30% of the analogue analysis sessions, were 95% and 97%, respectively.

Experimental Design

The analysis was conducted over a 10-day period with classroom instruction conditions randomly assigned so that the analogue analysis was preceded by 5 days of the classroom demand condition (Days 1, 3, 6, 9, 10) and 5 days of the classroom attention condition. Experimental control for the analogue analysis was demonstrated using a multielement design. The sequence of assignment of the analogue conditions following classroom demand and classroom attention was identical to control for possible sequence effects.

RESULTS AND DISCUSSION

Results of the analogue analysis (see the top panel of Figure 1) demonstrated higher levels of aggression in the attention condition ($M = 49.7$; range, 16% to 83%) than

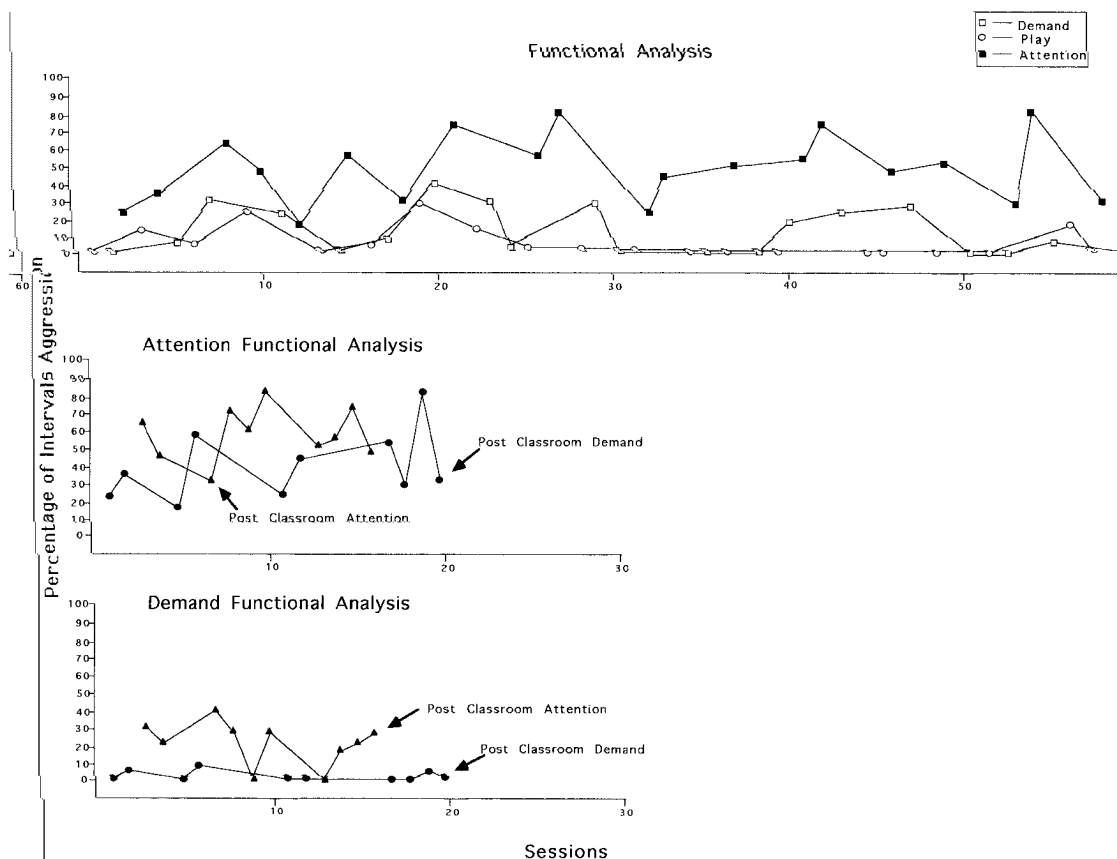


Figure 1. Percentage of intervals with aggression across analogue analysis conditions (top panel); across attention analogue conditions following classroom demand and classroom attention (middle panel); and across demand analogue conditions following classroom demand and classroom attention (bottom panel).

in the demand ($M = 12.8\%$; range, 0% to 41%) or play ($M = 7\%$; range, 0% to 30%) conditions. As shown in the middle panel, the difference in aggression levels during attention analogue conditions following classroom attention and classroom demand conditions was relatively small ($M = 58.6\%$ and 40.8% , respectively). However, aggression during demand analogue conditions was substantially higher after classroom attention ($M = 22.7\%$; range, 0% to 41%) than after classroom demand ($M = 2.9\%$; range, 0% to 10%) conditions (see bottom panel).

One possible explanation for the difference in responding during demand analogue conditions is that the density of reinforcement for aggression (i.e., in the classroom

attention condition) produced persistence of responding during the demand analogue conditions. Other possible explanations include (a) an extinction effect produced by moving from classroom attention to demand analogue conditions or (b) carryover effects reflecting higher levels of aggression in all analogue conditions following classroom attention relative to levels produced following classroom demand. The extinction explanation seems implausible given within-session data that revealed undifferentiated patterns of aggression (i.e., levels did not diminish within the session), nor were these levels reduced in the second demand analogue that occurred on the same day. In conclusion, although the generality of these findings is un-

known, this study demonstrated a functional relationship between prior classroom conditions and performance under analogue analysis conditions.

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