

*EFFECTS OF PRESESSION ATTENTION ON
THE FREQUENCY OF ATTENTION-MAINTAINED BEHAVIOR*

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The effect of prior attention was systematically manipulated to study its influence on rates of yelling and head hitting, both maintained by positive reinforcement in the form of attention. Higher levels of head hitting occurred in analogue attention conditions when the person was deprived of attention (no social interactions for 1 hr) prior to the analysis in comparison to when the person received high levels of attention (attention delivered on a fixed-time 30-s schedule for 1 hr) prior to the analysis.

DESCRIPTORS: aberrant behavior, functional analysis, establishing operations, response allocation

A response class is defined by the common consequences that each member of the class produces. However, the probability of occurrence of each class member is not equal. Researchers are now beginning to examine the environmental conditions that predict the occurrence of each member of an aberrant response class (Lalli, Mace, Wohn, & Livezey, 1995). The relative frequency of each topography within a class will covary as a function of factors such as relative rate of reinforcement, immediacy of reinforcement, and response effort (Herrnstein, 1970).

Recently, researchers have begun to examine the influence of establishing operations on aberrant behavior (Smith & Iwata, 1997). Establishing operations are antecedent conditions that influence the probability of behavior by increasing the value of consequent stimuli and the effectiveness of discriminative stimuli for a given response class (Michael, 1993). Establishing operations do not affect the availability of reinforcement. It seems reasonable to suggest that the probability of all members of a response class can increase in the presence of an establishing

operation under conditions in which availability of reinforcement (i.e., rate, immediacy, and effort) remains constant.

In this study the influence of pre-session levels of attention (no vs. high attention) on aberrant behavior (yelling and head hitting) under attention analogue conditions was examined. Functional analysis prior to this assessment had identified that both yelling and head hitting were maintained by positive reinforcement in the form of attention.

METHOD

Participant, Setting, and Target Behaviors

Paddy, a 20-year-old man with a diagnosis of severe mental retardation, participated in the study. He was nonambulatory and communicated using one-word utterances. He was capable of self-feeding, but was dependent on staff for other daily living needs. The assessment took place in the day-care center of a residential facility for persons with severe disabilities. The pre-session attention conditions and analogue analysis conditions were conducted in two separate therapy rooms, each with one-way mirrors. Paddy's aberrant behavior consisted of yelling and head hitting. The average interobserver reliability for occurrence of aberrant behav-

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ior, conducted on 50% of all sessions, was 94% (range, 86% to 100%).

Functional Analysis

A series of four analogue analysis conditions (attention, demand, leisure, and play) was conducted (see Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). Sessions were 15 min in length, and each condition was randomly implemented for four sessions in a multielement design. Four additional sessions of the attention condition were conducted, in which head hitting alone produced therapist attention (i.e., yelling was placed on extinction). Levels of attention prior to this functional analysis were not systematically controlled (i.e., analogue probes were conducted following leisure activities, independent living training, etc.). Aberrant behavior was recorded using a 10-s partial-interval procedure.

Noncontingent Attention and No-Attention Conditions

The second phase of the study consisted of systematically exposing Paddy to high levels of attention or no attention immediately prior to the analogue attention condition. Each pre-session condition was conducted for 1 hr, and one of these pre-session conditions was implemented per day during the study. Immediately following the pre-session condition, Paddy was escorted to the other therapy room, where one session of the analogue attention condition was conducted (identical to the previous phase). In the no-attention pre-session condition, Paddy was placed alone in a therapy room with preferred items. This alone condition occurred regularly in the day-care setting prior to the study. The noncontingent attention condition was similar to the alone condition with the exception that another adult was present in the room (not the therapist who conducted the analogue analysis) and interacted with Paddy on a fixed-time 30-s schedule.

The therapist unobtrusively observed Paddy throughout the 1-hr periods using a 10-s partial-interval recording procedure. No aberrant behavior was observed during any of the pre-session conditions.

RESULTS AND DISCUSSION

The results of the functional analysis are presented in the top panel of Figure 1. Aberrant behavior occurred in the attention condition only ($M = 20\%$; range, 7% to 45%). Head hitting occurred relatively infrequently ($M = 4\%$; range, 7% to 10%). When attention was delivered contingent upon head hitting only, there was an increase in this topography ($M = 18\%$; range, 5% to 30%). These results indicate that yelling and head hitting were members of the same response class.

The influence of the pre-session conditions on aberrant behavior within the attention analogue analysis was evaluated using a reversal design (see bottom panel of Figure 1). Higher levels of head hitting were observed in the analogue analysis following the no-attention condition ($M = 25\%$ in the no-attention condition; $M = 3\%$ in the noncontingent attention condition). Head hitting occurred during 57% of intervals in which aberrant behavior was scored following no attention, but during only 15% of intervals in which aberrant behavior was scored following noncontingent attention. The pre-session attention conditions did not seem to influence levels of yelling.

These results may have implications for the prediction and control of aberrant behavior in applied settings. In contexts in which an individual has limited access to attention for long periods, he or she may be more inclined to emit a member of a response class that has a higher probability of producing attention. Environments that include relatively rich schedules of noncontingent reinforcement may reduce the proba-

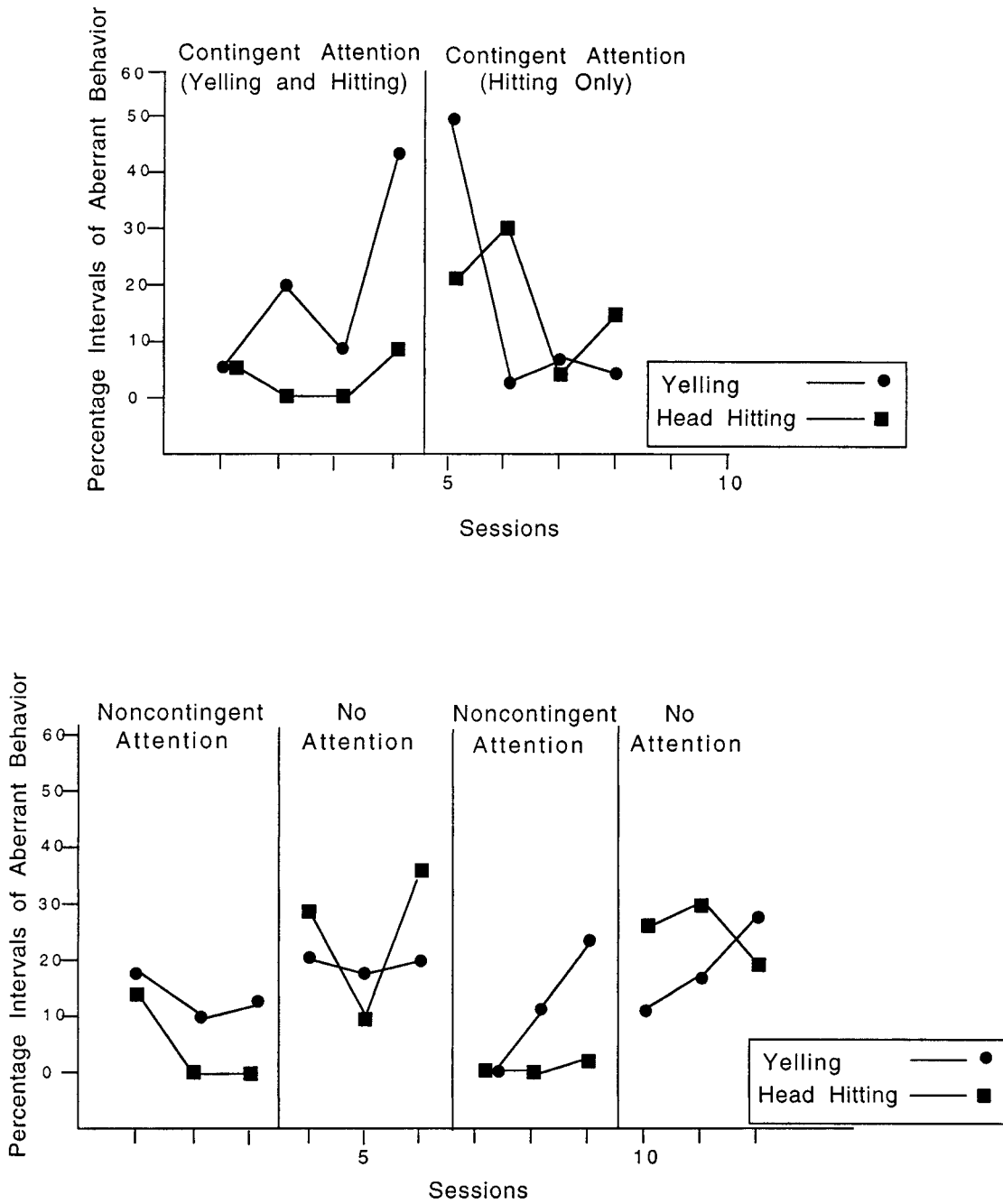


Figure 1. Percentage of intervals of aberrant behavior maintained by attention during the functional analysis (top panel) and following noncontingent attention and no-attention presession conditions (bottom panel).

bility of more severe forms of aberrant behavior. It is interesting to see changes in within-class response allocation under conditions in which attention contingencies are

held constant. A number of tentative explanations could be suggested. Perhaps head hitting is the more effortful response, but historically has produced the most immedi-

ate reinforcement, suggesting an interaction between history of reinforcement and establishing operations. Therefore, head hitting might occur more frequently following conditions in which the individual is relatively deprived of reinforcement. Alternatively, in addition to influencing the value of reinforcers, establishing operations can have an evocative effect on all members of a response class. However, these hypotheses await further investigation.

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