# 2005 STUDENT PAPER WINNERS: ABSTRACTS

## THE EFFECTS OF MULTIPLE TACT AND RECEPTIVE-DISCRIMINATION TRAINING ON ACQUISITION OF INTRAVERBAL BEHAVIOR

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The purpose of this study was to determine whether multiple-tact training and receptivediscrimination training could be used to teach thematically related vocal intraverbals preschool children. Multiple-tact training involved teaching a child to name both the item and the category to which the item belonged. Receptivediscrimination training consisted of teaching a child to select a picture card in the presence of a question from the experimenter regarding the term or its category. When neither of these strategies resulted in substantial increases in intraverbal responses, a typical intraverbal training protocol using tact prompts and fading was implemented. Six typically developing children participated in the study. A multiplebaseline design across word categories was used to evaluate the effects of the three training procedures. Results indicated that both multipletact and receptive-discrimination training had minimal effects on the strength of the intraverbal repertoire, whereas direct intraverbal training had a more substantial effect. The results provide some evidence of the functional independence of verbal operants, as well as the independence of the listener and speaker repertoires. Receptivediscrimination and multiple-tact training may have facilitated acquisition of intraverbals; however, further research is needed to assess how these repertoires might interact with each other.

## FUNCTIONAL INTERDEPENDENCE OF MANDS AND TACTS IN PRESCHOOL CHILDREN

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Skinner's (1957) analysis of verbal behavior proposes that the mand and the tact are functionally independent verbal operants, each of which is acquired through a unique history of reinforcement. This study attempted to replicate the findings of Lamarre and Holland (1985), who empirically demonstrated the functional independence of mands and tacts in typically developing preschool children. Four children participated in the study. All of them were initially trained to complete two 4-piece assembly tasks. Three children were trained to tact the four pieces that comprised one of the assembly tasks, and to mand for the four pieces that comprised the other task, using arbitrary response forms. The remaining child received tact training only, and only on one task. The effects of training on the untrained operant were evaluated in a multipleprobe design across assembly tasks. Following mand training, 3 out of 3 children reliably emitted tacts under testing conditions. The effects of the tact training, on the other hand, differed across participants. The results differ from those of Lamarre and Holland. However, from the point of view of Skinner's analysis, they are not necessarily unexpected. Future research should attempt to identify variables that affect transfer of control between mand and tact relations.

# PRECURRENT BEHAVIOR AND MEDIATION OF DELAYED MATCHING TO SAMPLE: SYSTEMATIC REPLICATION OF EXTENSION

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Although "memory" research and theory often come under the domain of cognitive psychology, these areas may also be seen as being open to radical behavioral interpretations. Delayed matching to sample (DMTS) preparations

have often been used to study performance that involves the occurrence of behavior some time after the presentation of a relevant stimulus, or what is typically called short-term memory (STM). The current study involves three experiments that provide evidence for the role of overt behavior in the mediation of DMTS performance in five-yearold children. Experiments 1 and 2 support the assertion that sample-specific, differential mediating behavior (in the form of key presses) may facilitate performance in a DMTS task with delays of up to 15 seconds. Experiment 3 examined the effectiveness of two forms of hand positioning as the mediating response forms: sample specific hand positions that remained visible to the participants and those that were not visible to the participants during the delay Results consistent interval. are interpretations of memory that involve behavioral mediation rather than mediation that requires a unique "mental" process.

# EMERGENCE OF COMPLEX CONDITIONAL DISCRIMINATIONS BY JOINT CONTROL OF COMPOUND SAMPLES

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The present study explored the emergence of verbal behavior as result of the joint control of two novel antecedent stimuli. Conditional discriminations were used for learning and for probing. Four stimuli P1, P2, Q1, and Q2 were samples and four stimuli A1, A2, B1, and B2 were the comparisons with one sample and two comparisons in each trial. Each sample controlled selections of two comparison stimuli. In a probe with no reinforcement, one P and one Q stimuli formed a compound sample, and the four comparisons appeared in each trial. Only selections of one comparison have been reinforced in the presence of the two sample stimuli during teaching. I analyzed whether the two sample stimuli would jointly control comparison selections. In Study 1, two adult participants did not show the emergence of the discrimination with the compound sample. In Study 2, I modified the procedure of Study 1 in such a way that a prompt procedure was used, trials of the four simple conditional discriminations were gradually intermixed, and the reinforcement was reduced. The adult participants showed the emergence of the conditional discrimination with the complex sample. Thus, this study demonstrated the emergence of discriminations by joint control.