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Generalization of Promise-Do Correspondence Training with Respect to the Individual to Whom the Promise is Made

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GENERALIZATION OF PROMISE-DO CORRESPONDENCE TRAINING
WITH RESPECT TO THE INDIVIDUAL TO WHOM
THE PROMISE IS MADE

by

Robert J. Latka

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GENERALIZATION OF PROMISE-DO CORRESPONDENCE TRAINING
WITH RESPECT TO THE INDIVIDUAL TO WHOM
THE PROMISE IS MADE

Robert J. Latka, M.A.

Western Michigan University, 1990

This study used 3 subjects of normal (non-impaired) intelligence, 1 female and 2 males, between the ages of 10 and 13 years to study generalization of promise-do correspondence training effects. In a replicated AB design, contingent monetary reinforcers were used to establish promise-do correspondence in playing non-preferred computer games. This study demonstrated that the effects of correspondence training procedures could be generalized to an alternative listener or individual to whom the promise was made. Generalization was less evident when there was no listener present. This study also provided some evidence that effects of promise-do correspondence training may not generalize to say-report correspondence. Data also suggested gender differences in pre-existing do-report correspondence; however, this was impossible to validate with 3 subjects. Data on correspondence were computer recorded through a specially designed software package.

ACKNOWLEDGEMENTS

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Robert J. Latka

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INTRODUCTION

How do you know, when you leave your child with an alternative care provider (e.g., a sitter or a teacher) that the child will do what he or she has promised to do? A recent article by Paniagua (1989) defines lying in children as a "lack of verbal-nonverbal correspondence" (p.975) between what a child says he or she will do and what he or she actually does. This is contrasted, then, to truthfulness that involves a high rate of verbal-nonverbal correspondence. Paniagua goes on to discuss approaches to the training of verbal-nonverbal correspondence in children indicating that punishment, often the treatment of choice for lying behavior, is likely to be ineffective. He reminds the reader that the usual consequence of lying is avoidance of punishment and what the caretaker thinks is punishment may be negative reinforcement.

Reinforcement of verbal-nonverbal correspondence (truthfulness) must, therefore, become the treatment of choice. A growing body of research has been developed over the past few years regarding procedures for increasing rates of correspondence between verbal and non-verbal behavior. Within this body of research much emphasis has been placed upon say-do or promise-do

correspondence (Baer, Williams, Osnes, & Stokes, 1985; Baer, Blount, Detrich, & Stokes, 1987; Deacon & Konarski, 1987; Guevremont, Osnes & Stokes, 1986a; Osnes, Guevremont & Stokes, 1986; Paniagua & Baer, 1988). From this work has come a variety of correspondence training procedures. Stokes, Osnes & Guevremont (1987) provide an in-depth analysis of one of these procedures involving the prompting of a subject to state that he or she will engage in a particular behavior and reinforcing the subject after engaging in that behavior. In this way, engaging in the behavior is either brought under the control of the antecedent verbalization (Osnes et al., 1986) or becomes a rule-governed behavior (Deacon & Konarski, 1987).

Maintenance of correspondence training effects over time has been addressed by a number of researchers (Baer et al., 1984; Baer et al., 1985; Baer et al., 1987; Guevremont et al., 1986a; Guevremont, Osnes, & Stokes, 1986b). Some (Baer, Williams, Osnes & Stokes, 1984; Osnes et al., 1986) have shown that maintenance of correspondence training effects may be enhanced by providing reinforcement of saying or promising after correspondence training has been discontinued. On the other hand, Guevremont et al. (1986a) showed that immediate reinforcement of verbal statements of commitment was less effective in maintaining

correspondence than delayed reinforcement, indicating that subjects may have been able to discriminate between training and baseline phases when consequences were more immediate. In a follow-up to this study, Guevremont et al. (1986b) reported that maintenance of correspondence training effects could be achieved by providing a mixed sequence of contingencies for reinforcement of saying and doing which was indiscriminable to the subject. Further, Baer et al. (1987) indicated that maintenance of correspondence training effects could also be accomplished through intermittent reinforcement for verbal-nonverbal correspondence.

Other studies have emphasized generalization of correspondence training across behaviors (e.g., Baer et al., 1985) and across settings (e.g., Guevremont et al., 1986a). Guevremont et al., (1986a) showed that the effects of correspondence training procedures with three 4-year old children, generalized from preschool to home settings, i.e., demonstrating that correspondence between verbal and non-verbal behavior could generalize across settings. Baer et al., (1985) showed the effects of correspondence training procedures with a 4-year-old girl generalized from one trained play behavior to other non-trained play behaviors, i.e., indicating that correspondence between verbal and non-verbal behaviors could generalize across behaviors.

In another type of study not involving correspondence training, Stults and Messe (1985) found that out of a group of 83 female college students, those who made public commitments to engage in a particular behavior exhibited a higher rate of verbal-nonverbal correspondence than those who made private commitments. Zettle and Hayes (1983) found that making statements to the experimenter about engaging in a particular behavior resulted in a higher rate of that behavior than making the same statement by him- or herself. The results of these two studies suggest the importance of the person to whom the promise or verbal commitment is made. There appears to have been no studies involving generalization of correspondence training effects regarding individuals to whom the promise is made.

The present study was intended to demonstrate generalization of promise-do correspondence training effects, to situations where the individual to whom the promise is made either has no control of the reinforcer or was not present. Correspondence training procedures were similar to those used in previous studies involving provision of reinforcers contingent upon engagement in a previously chosen behavior. Reliability of data collection was assured through a computer software package providing mechanical recording of engagements in the specified behavior.

METHOD

Subjects

Three subjects of normal [non impaired] intelligence, 2 males, age 10 and 13 years and 1 female, age 11 years, were studied. Subjects were selected on the basis of adequate English repertoire for understanding instructions and adequate motor and visual skills for playing computer games. Subjects were also reported to be relatively honest by their parents. Prior to beginning the study, subjects and their parents were informed that the subjects would be playing various computer games and that at the end of each set of 6-8 sessions the subjects would receive a sum of money (between \$0.00 and \$1.00 per session) based upon their performance.

Setting

Sessions were conducted in a small office with two desks arranged so that the experimenter or a confederate could sit behind the subject, allowing relatively unobtrusive observation. A computer was placed on the desk directly in front of the subject. Interruption of subjects was kept to a minimum by limiting access to the room to one subject and the experimenter or a

confederate. Subjects participated in 6-8 sessions during time blocks between 4 and 6:30 p.m. each day approximately 3 days per week.

Target Behaviors and Measurement

Materials

A software package, requiring an IBM compatible computer with one 5-1/4 inch disk drive and 128 kilobites of memory, was developed especially for use in this study. This package contains 8 different computer games, each taking 1 minute to play. These include 2 graphic games (catch the circle and avoid the circles), 1 match the character on the screen game, and 5 math games (addition, subtraction, multiplication, division and math free-for-all). These were simple games involving no special skills. Game play was also kept simple involving little direction. Scores were provided briefly at the end of each game in order to better simulate game situations; however, no audio component was used.

Definition of Target Response

The subject's choice and the number of times the subject played the chosen game were recorded on the computer. The experimenter or confederate also recorded the subject's choice and the number of times the subject

played the chosen game in order to facilitate reinforcement. As will be discussed, during the last 2 experimental conditions the task of recording was given to the subject. However, the target response was the percentage of times the subject played the chosen game as generated by the computer program.

Procedure

The subjects participated in 6 to 8 ten-game sessions each day, allowing each phase of the experiment to be completed in one 1 and 1/2 to 2-hour time block. At the beginning of each time block, the contingencies regarding payment for each session were explained to the subject. These varied depending on the experimental condition. During baseline 1 condition, subjects were allowed to experience each game and preference for individual games was assessed. Then the subject was asked to verbally commit to play one of the games during the first 10-game session. The subject then entered this response into the computer. No consequence was provided for making or not making a choice. The subject was then allowed to select and play 10 games. This procedure was repeated for the second 10-game session and so on. At the end of the time, the subject was paid according to the contingencies described.

Experimental Conditions

Baseline 1

During the first baseline condition, subjects were paid a set sum (\$7.00 to \$8.00) regardless of how many times they played the game they chose and they were allowed to choose from all 8 games. This phase of the experiment was used to acquaint subjects with games and to differentiate between preferred and non-preferred games.

Baseline 2

During the second baseline condition, subjects were again paid a preset sum (\$7.00 to \$8.00) regardless of how many times they played the game they chose, but they were only allowed to choose from the 4 least preferred games. This condition provided baseline on the percent of correspondence (the percent of times the subject played the chosen non-preferred game).

Correspondence Training

During the correspondence training condition, the subject was paid 10 cents for each time he or she played the game he or she chose and only allowed to choose from the 4 least preferred games.

Alternate Observer

During this condition, the experimenter (the author) was replaced by a confederate who was blind to the current contingencies. The confederate was instructed only to say that the experimenter was not able to be present, but would take care of payment when he arrived at the end of the session. The confederate asked the subject's choice of the 4 least preferred games and monitored the subject just as the experimenter had done. At the end of the session, the subject was paid, by the experimenter, for each time he or she had played the chosen game.

Self Report

During this condition, the subject was asked to record both the game he or she was committing to play and the games which he or she played during each 10-game session, while the experimenter remained in the room apparently engaged in another activity. The subject was, however, still required to make a verbal commitment prior to each 10-game session. Again the subject was paid 10 cents for each time he or she played the game he or she committed to play and only allowed to choose from the 4 least preferred games. This was an intermediate condition allowing transition to the no observer condition.

No Observer

During this condition, the subject was again required to record both the game he or she was committing to play and the games which he or she played during each 10-game session. However, following initial directions, the experimenter left the room, returning only at the end of the session to pay the subject. Once again, the subject was paid 10 cents for each time he or she played the game he or she chose to play and only allowed to choose from the 4 least preferred games. This condition allowed assessment of generalization of correspondence training effects to a situation where no observer was present.

Experimental Design

The generalization of correspondence training to listeners without control of reinforcers and to situations where the listener was not present was examined using a replicated AB design across subjects. After determination of non-preferred games and subsequent measurement of correspondence between verbal commitment to play one of the non-preferred games and actual playing of the chosen game (baseline), correspondence training was implemented to reinforce playing of the chosen non-preferred game. After correspondence was established as indicated by an increased percent of correspondence

relative to baseline 2 rates, generalization to a condition where the listener (the person to whom the commitment was made) had no control over the reinforcer, and then to a condition where the listener was not present was assessed. An intermediate condition involving the subject self-recording his or her game playing was necessary to avoid manipulation of 2 variables at the same time which would have confounded the results. In order to assess reliability of the results, this design was replicated across 3 different subjects.

Reliability

All data on actual game playing performance were machine-generated and defined through the software package, thus eliminating the need for additional human observers and ensuring 100% reliability.

Data collected by the experimenter and confederates were only used to facilitate reinforcement. Reliability of the subject's self report was examined as an adjunctive dependent variable. Instructions regarding contingencies and prompts to choose a non-preferred game to play during each 10-game session were scripted in order to maintain consistency between conditions and subjects.

RESULTS

Figure 1 represents data collected during baseline and treatment conditions. Baseline 1 condition was used to determine non-preferred games and to familiarize the subject with the equipment and procedures. After analysis of the first subject's performance, it was decided to shorten baseline 1 condition by assuming that subtraction, multiplication, division and math free-for-all were non-preferred by all subjects. Baseline 2 condition indicates the subjects' low percent of playing non-preferred games.

During correspondence training (CT), verbal-nonverbal correspondence was quickly developed in subjects 1 and 2; however, only inconsistent correspondence was developed in subject 3. Similarly, it appeared to the alternate listener (AL) that the second subject's larger decrease in correspondence was due to the subject forgetting her choice after the second response.

With all 3 subjects there appears to be only little difference between rates of correspondence during correspondence training and when the alternate listener (AL) was present. In fact, the first subject exhibited a

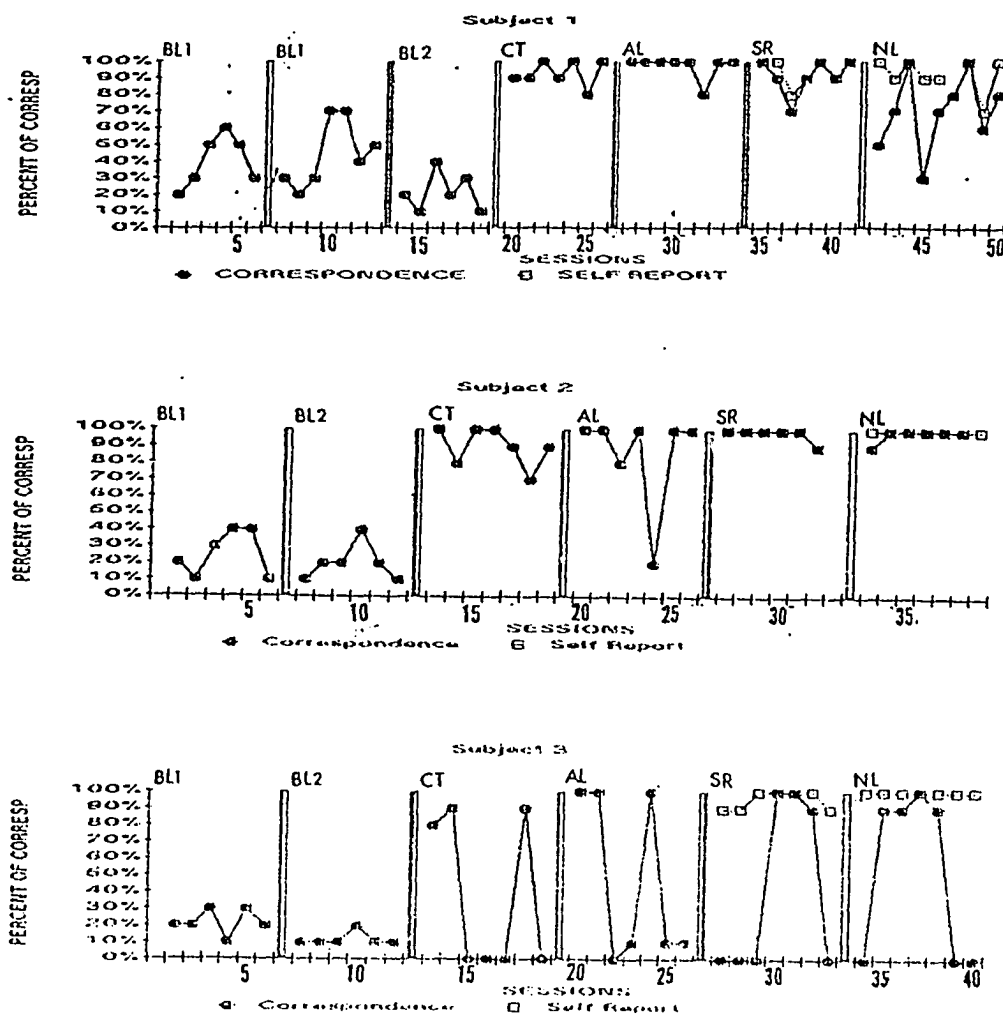


Figure 1. Percent of Correspondence for Each of 3 Subjects During Baseline 1 (BL1), Baseline 2 (BL2), Correspondence Training (CT), Alternate Listener (AL), Self Report (SR), and No Listener (NL) Conditions.

higher rate of correspondence with the alternate listener present.

There appears to be little difference in subjects' performance between the self report (SR) condition and the correspondence training condition. With the two male subjects, 1 and 3, however, there appears to be a lack of agreement between self report and actual performance which was not exhibited by subject 2, the only female subject. When no listener was present (NL), at least some discrepancy between self report and actual performance was noted with all subjects and to a greater degree with subjects 1 and 3. Rates of correspondence for subjects 1 and 2 also decreased during this condition, although more notably with subject 1.

DISCUSSION

It should be noted that some lack of correspondence during both baseline and treatment conditions appeared to represent key punching errors rather than a choice to play a different game. This was evidenced through subjects' occasional verbal and gestural responses following suspected efforts. These were, however, rare and probably had little effect on the results.

The results of the current study are consistent with those of previous studies (Baer et al., 1985; Guevremont et al., 1986a) in indicating that verbal-nonverbal correspondence can be taught using reinforcement approaches. The fact that only inconsistent correspondence was acquired by subject 3 serves to strengthen the notion that individual uncontrolled variables, such as previous reinforcement histories and competing reinforcement schedules, may increase the difficulty of training any behavior. Although it might have been prudent to provide additional training to this subject, the data show similar patterns across all treatment phases and in this way were not inconsistent with results from the other 2 subjects.

With all subjects it seems apparent that verbal-nonverbal correspondence was successfully generalized to

listeners (individuals to whom a commitment is made) who do not have control over the reinforcers when contingencies for verbal-nonverbal correspondence remained in place. This leads to the conclusion that it is not necessarily the individual to whom the commitment or promise is made which is important, but the contingencies that are in place. An important follow-up to this study would be to remove the contingencies, in effect providing an extinction condition, to see if generalization to the alternate listener would occur in this situation.

In this study, it is apparent that self report was, at least with subjects 1 and 3, significantly different from actual performance, indicating a particularly low percent of do-report correspondence (Paniagua, 1989). This behavior was not, however, addressed during correspondence training. This low percent of do-report correspondence would tend to indicate that promise-do correspondence training as used in this study may not generalize to do-report correspondence, though the data remain inconclusive. The fact that subject 2 was the only female in the study suggests the possibility that females, through reinforcement history, may have a better developed do-report correspondence or are more honest than males. However, too few subjects were studied to draw any conclusions in this area.

It also appears that generalization to a situation in which the listener was not present may be difficult to attain with some subjects. This may, however, be an artifact of the lack of do-report correspondence, since delivery of reinforcers was contingent upon self report rather than on actual performance. The general pattern of decreased performance over time may reflect a number of other problems such as satiation for the reinforcer or the increasing aversiveness of being required to play non-preferred games over a long period of time.

In any case, this study, like those of Baer et al. (1985) and Guevremont et al. (1986a) appears to provide new information regarding the generalization of correspondence training. As may be inferred from Stults and Messe (1985) and Zettle and Hayes (1983), the individual to whom the promise was made may be important. However, it appears that, at least in promise-do correspondence, the consequences are more important than the individual to whom the promise was made, since generalization (both to another listener and to a situation where no listener was present) was apparent. Although it was not the intent of this study to explore this phenomenon, it is similarly apparent that the effects of promise-do correspondence training procedures may not generalize to do-report correspondence. Many questions are still, however, left unanswered and much

research regarding generalization of correspondence training effects is still needed.

Appendix A

Approval Letter from the Human Subjects Institutional Review Board

WESTERN MICHIGAN UNIVERSITY

Date: January 15, 1990

To: Robert J. Latka

From: Mary Anne Bunda, Chair *Mary Anne Bunda*

This letter will serve as confirmation that your research protocol, "Generalization of Correspondence Training Effects Across Varying Levels of Listener Control of Reinforcement", has been approved as full by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application. You must seek reapproval for any change in this design.

The Board wishes you success in the pursuit of your research goals.

xc: P. Mountjoy, Psychology

HSIRB Project Number 89-06-01

End Date of Approval January 15, 1991

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