THE INFLUENCE OF VERBAL REINFORCEMENT AND EXPERIMENTER SELF-DISCLOSURE ON PERSONALITY TESTS.

By

CHRISTINE ARLETT
B.Sc., University of Leicester, 1972

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

in the Department of Psychology

We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA
November, 1974
In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Psychology
The University of British Columbia
Vancouver 8, Canada

Date Nov. 20 1974
Abstract

Experimenter self-disclosure and verbal reinforcement of subject disclosure during an interview were both predicted to result in increased subject disclosure in a subsequent testing situation, as compared with direct instructions to the subjects to be more open. The results indicated that for male subjects, verbal reinforcement had the predicted effect, but experimenter self-disclosure did not. Female subjects were found to be more disclosive than male subjects in general, but were relatively uninfluenced by the experimenter treatment conditions. Experimenter self-disclosure was shown to result in an increase in social evaluative anxiety and in more favourable perceptions of the self and of the experimenter in the subjects concerned. Both of these factors are discussed as having counteracted any modeling effect of experimenter self-disclosure. An interpretation of the results in terms of an interaction between subject sex, experimenter sex and experimental conditions is proposed, and the implications this has for the related literature, which in general has ignored such variables as subject and experimenter sex, are discussed.
# Table of Contents

Abstract ii

List of Tables iv

Acknowledgement v

Introduction 1

Method 7

Hypotheses 17

Statistical Analysis 18

Results 19

Discussion 30

Bibliography 34

Appendix A 37

Appendix B 38

Appendix C 40
List of Tables

Table I: Anovas, with a priori orthogonal comparisons, for measures of subject self-disclosure (F values). 20

Table II: Separate sex anovas for measures of self-disclosure (F values). 21

Table III: Anovas with a priori comparisons for anxiety measures (F values). 24

Table IV: Anovas, with a priori orthogonal comparisons, on measures of subject perception of the experimenter (F values). 26

Table V: Factor Matrix of measures of self-disclosure. 28

Table VI: Pearson correlation coefficients between length of interview and dependent measures. 29
Acknowledgements

I particularly wish to thank Allan Best whose advice and encouragement have been invaluable to me at every stage in the development of this thesis.

My thanks also to Brian Little for his critical comments and suggestions during the planning and manuscript stages.

In addition, my thanks to Ralph Hakstian and Virginia Green for their help with the statistical analysis and interpretation of the data.

Finally, my thanks to Ross for taking on so much of the drudgery without complaint, and to him and the cats for their support whenever the end disappeared from sight.
Introduction

There is growing evidence that responses on psychological tests and their interpretation are influenced by a number of extraneous factors such as the demand characteristics of the experiment (e.g. Orne, 1969), experimenter characteristics (e.g. Harris, 1971; Rosenthal, 1969) and experimenter bias effects (Rosenthal, 1966; Rosenthal, 1969). To the extent that such variables remain unspecified, the generalizability of test interpretation will inevitably be limited and its validity decreased.

One factor which would intuitively appear to be of importance in this context is the nature of the interactions between the subject and the experimenter prior to the testing situation, particularly as a preliminary interview is common practice in the clinical administration of tests.

Only one experimental study has been published in this area, that of Jourard and Kormann (1968). College students were pretested with the Edward's Personal Preference Schedule (EPPS). Half the group spent 30 minutes "getting to know" the experimenter, while the other half did not. Retesting on the EPPS revealed significant changes in scores for the former group and not for the latter. The study may be criticized on several grounds. Firstly, the independent variable of "getting to know" the experimenter needs further specification as in this case it confounds time spent with the experimenter with the process of interaction with the experimenter. Secondly, the experimenter-subject interactions presumably involve not only self-disclosure.
on the part of the experimenter, but also social reinforcement and a variety of other factors and the relative importance of each of these needs to be ascertained. Thirdly, although an intervening variable of increased subject openness is presumed to be responsible for the change in scores, this has yet to be demonstrated. Fourthly, the control group is inadequate in light of the Hawthorne effect (Lana p.121, 1969): an attention placebo control is necessary before the differences may be firmly attributed to the experimental condition. Finally, the relationship between change scores and subject and experimenter characteristics is ignored.

Thus, although the importance of "good" rapport is stressed by most textbooks on testing (e.g. Anastasi, 1961; Cronbach, 1970), there is almost no experimental evidence as to how quality of rapport influences the test results.

Experimental studies of interviewing techniques have shed some light on the impact of various experimenter behaviours on the amount of self-disclosure shown by subjects. One of the variables that has received a great deal of attention is self-disclosure on the part of either the experimenter or a separate model. This has been consistently found to significantly increase self-disclosure on the part of the subject (e.g. Marlatt, 1971; Powell, 1968; Doster, 1972; McAllister & Kiesler, 1974; Doster & Brooks, 1974). Powell (1968) demonstrated that while self-disclosure on the part of the experimenter led to an increase in both positive and negative disclosures by the subject, a reflection-restatement technique led to an increase
in negative disclosure alone and approval-supportive statements made no difference in the amount of subject self-disclosure. On the other hand, there is some question as to the relative effectiveness of probing and self-disclosure techniques, particularly when the information required is of an intimate nature (Cozby, 1973). Increase in subject disclosiveness due to experimenter self-disclosure carries over within an interview (Jourard & Jaffee, 1970) and it is therefore reasonable to predict that responses to test materials presented subsequent to the interview would be similarly affected.

Jourard (1969) has argued that experimenter self-disclosure results in greater honesty on the part of the subject, basing this on equity theory (Adams, 1965), which proposes that the amount of information provided in a diadic situation is always balanced on each side (Jourard, 1971). However, Cozby (1973) has pointed out that this need not necessarily apply to an experimental setting where the subject expects the situation to be inequitable.

Alternatively, such a prediction could be based on modeling theory whereby the experimenter is seen as modeling selfdisclosive behavior as appropriate behavior for the subject in that situation. It is important to note at this point that 'modeling' in this case is used in a much more general sense than in Bandura's paradigm (e.g. Bandura, 1971), in that the response to be imitated is not a specific behavior, but rather a category of selfdisclosive behaviours. However, to the extent that the modeling literature's findings can be
extrapolated to this more general form of modeling, they would suggest that it should serve to facilitate self-disclosure as this is an already established response pattern (Bandura, 1971). Thus Marlatt (1971) and McAllister and Kiesler (1974) have both interpreted the increase in self-disclosure by subjects following experimenter self-disclosure as a modeling effect.

Increased self-disclosure might also be expected in light of the increased clarity of the demand characteristics of the situation. Subjects in an experiment tend to try to guess what the hypotheses being tested are, and then act so as to confirm them, unless they are too obvious, in which case the 'screw you effect' comes into operation and leads to the opposite behaviour (Orne, 1969; Masling, 1966; Riecken, 1962). Thus self-disclosure by the experimenter may be seen either in a social learning context as modeling resulting in the facilitation of a behaviour pattern already in the subject's repertoire, or as a means of clarifying the demand characteristics of the experiment for the subject. In general, authors have neglected to deal with this issue adequately. For example, Doster's (1972) study which examined the effectiveness of pretraining on increasing subjects' disclosiveness, compared role rehearsal and an observational model with detailed instructions, and used as a control a condition with minimal instructions, thus leaving the effect of detailed instructions (i.e. clarified demand characteristics) alone undetermined. Further, McAllister and Kiesler (1974) used a combination of a model and detailed instructions so as to 'maximize a modeling effect'.

The present study contrasts experimenter self-disclosure with a condition receiving detailed instructions so as to evaluate the effects of direct instructions alone.

Another variable which has received considerable attention in interviewing is that of verbal reinforcement. There is direct evidence regarding the influence of this variable on subsequent test results. Tobias (cited in Masling, 1966) reinforced the word 'dog' during an interview and observed an increase in animal responses on a Rorschach administered subsequently. Reinforcement of emotional words in a preliminary interview has been shown to lead to a decrease in MMPI anxiety scores (Krasner, 1965, p222). Krasner specifically interprets this as a clarification of the demand characteristics of the experiment. A third condition of reinforcement of self-reference statements was therefore added to this study.

In summary, this study examined the influence of various experimenter behaviors during an interview on subject self-disclosure in a subsequent testing situation. Three experimental treatment conditions were compared: experimenter self-disclosure, reinforcement of self-referent statements and direct instructions. Two control conditions were also included: a control interview condition where the interview was conducted with no experimenter disclosure and minimal social reinforcement and a no interview, minimal instructions condition.

The following hypotheses were made. Firstly, it was hypothesized that increased self-disclosure would be revealed in both a quantitative increase in the amount of information given
and in an increase in the amount of negative information revealed. Secondly, it was hypothesized that self-disclosure would be inversely related to the amount of anxiety present during the testing situation. Thirdly, it was hypothesized that the experimental conditions would influence the subjects' perceptions of the experimenter. This is based on Jourard and Friedman's (1970) finding that experimenters who disclosed were viewed more positively in general than those who did not. Finally, it was hypothesized that subject sex would interact with treatment conditions. Although some studies report no sex differences, those that do report differences have found females to be more disclosing than males (Cozby, 1973; Little, 1967) and it was therefore predicted that this relationship would be confirmed. It was also predicted, however, that males would be more susceptible to influence by both experimenter self-disclosure and verbal reinforcement as the experimenter was female.
Method

1. DEPENDENT MEASURES.

A. Measures of Self-disclosure. Measures of self-disclosure were selected on the basis of the following hypotheses:

a) increased self-disclosure will be reflected in a quantitative increase in information provided by the subject,

b) increased self-disclosure will further be reflected in an increase in the amount of unfavourable information about his/her self which each subject provides, and

c) where the subject is given the choice of levels of intimacy at which to respond, increased self-disclosure will be reflected in the choice of the more intimate level.

The three instruments which were selected to provide measures of these three facets of self-disclosure were an adjective checklist (A.C.L.), the Marlowe- Crowne Social Desirability Scale (M.C.) and a modified form of the Repertory Test (Rep. Test).

(i) Adjective Checklist. Subjects have been found to be highly consistent in the number of adjectives which they check off as self-descriptive from any given list (Gough & Heilbrun, 1965). It is proposed that this is at least in part a function of their chosen level of self-disclosure in an experimental setting, in which case increased self-disclosure would be reflected in an increased total number of adjectives checked. The number of unfavourable adjectives checked was hypothesized to reflect
probability of disclosure of negative material.

A further measure of the amount of negative information provided is the extent of the discrepancy between the subjects' descriptions of themselves and those of their ideal selves, that is, between how they saw themselves at that time and how they would most like to be. This was obtained by asking the subjects to complete the checklist twice, once checking those adjectives felt to be self-descriptive and once checking those descriptive of how they would most like to be.

The checklist used consisted of the seventy-five adjectives listed as favourable and the seventy-five listed as unfavourable in the manual of the Gough Adjective Checklist (Gough and Heilbrun, 1965), combined into one alphabetically ordered list. Three measures were derived, as discussed above:

(a) total number of adjectives checked (ACLSELF),
(b) ratio of the number of negative adjectives checked to the total number of adjectives checked (ACLNEG),
(c) the total number of adjectives which were checked either as self-descriptive but not ideal-self-descriptive or as ideal-self-descriptive but not self-descriptive (ACL S-IS).

(ii) Marlowe-Crowne Social Desirability Scale. The Marlowe-Crowne Social Desirability Scale is intended to assess the tendency for subjects to respond in a socially desirable direction. An inverse relationship between probability of self-disclosure and M.C. scores was postulated.
Repertory Test. This test was developed in the context of Personal Construct Theory (Kelly, 1955, Landfield, 1971), but in this case it was used solely as a means of observing the level of intimacy at which subjects would choose to respond when they were given that choice.

There is considerable evidence that the constructs chosen by subjects may be sorted into categories such as psychological, physicalistic and role (Little, 1967). It is proposed that these represent different points on a continuum of intimacy with physicalistic and psychological representing the extremes. Thus scores on this continuum would be reflective of subject self-disclosure.

The Rep. Test calls for a subject to state ways in which any two elements of successive triads differ from the third. In this case, seven elements were used (see Appendix A) and fifteen constructs, or dimensions, were elicited for each subject. Choice of elements (e.g. 'someone I feel uncomfortable with') and the inclusion of the 'self' element in each triad were designed to increase the pull for revealing constructs and thus increase the tendency for defensiveness. Constructs elicited were rated on a four point scale by two independent raters to establish level of intimacy. Thus psychological constructs, such as 'aggressive-shy', were rated most highly (3) and physical ones, such as 'young-old' were rated zero. A similar scoring system has been shown to have high interjudge reliability (McPherson, Barden & Buckley, 1970). A total score was obtained for each subject by summing rated levels of intimacy (SCORE).
This total score was predicted to increase with increased subject self-disclosure. An alternative scoring system using the dichotomous categories of intimate and non-intimate was rejected on the basis that the inter-judge reliability on a sample of questionnaires was found to be considerably lower than that found for the system described above.

In addition, subjects were asked to rate themselves, their ideal selves and the experimenter on a six-point scale for each of these constructs. A discrepancy score was obtained between the self and the ideal self ratings for each subject (RT S-IS). As discussed above, this was considered to be an index of the amount of negative information provided and thus a measure of self-disclosure. The ratings relating to the experimenter will be discussed below.

B. Anxiety Measures. Self-disclosure was predicted to be inversely related to the amount of anxiety present in the testing situation. Two tests were used as indicators of anxiety level: the state-trait anxiety inventory (STAI) and the fear of negative evaluation scale (FNE).

a) State-Trait Anxiety Inventory (Speilberger, Gorsuch & Lushene, 1968). This test yields one measure of state, i.e. present, levels of anxiety and one of trait, i.e. habitual, levels of anxiety. Trait anxiety was predicted to increase with increasing subject openness, whereas state anxiety scores were predicted to decrease as a function of the reduced
ambiguity of the experimental situation associated with all three experimental conditions as compared to the controls.

b). Fear of Negative Evaluation Scale (Watson & Friend, 1969). The FNE is designed to yield a measure of social-evaluative anxiety. Again, scores were predicted to be lower in the experimental conditions.

C. Perception of the Experimenter. Measure of the subjects' perceptions of the experimenter were derived from the Rep. Test in the form of discrepancy scores between (i) the subjects' self-ratings and their ratings of the experimenter and (ii) the subjects' ideal self-ratings and their ratings of the experimenter. It was hypothesized that self-disclosure by the experimenter would lead to a smaller discrepancy between the ideal self and the experimenter ratings and a corresponding larger discrepancy between the self and the experimenter ratings.

2. SUBJECTS.

Potential subjects were randomly selected from a population of first and second year university students. Each person was contacted by phone and asked to participate in a study relating to individual differences in attitudes. The first fifty of each sex to agree became the subjects for the experiment.

3. DESIGN.

Subjects were randomly assigned to five treatment
conditions, with the constraint that each condition contain ten males and ten females. The five conditions were:

(1) experimenter self-disclosure
(2) verbal reinforcement of subject self-disclosure
(3) direct instructions
(4) control interview
(5) no interview.

The interview was designed to elicit a large number of self-disclosive statements in a short period of time. It consisted of a series of brief descriptions of situations which had seemed in pilot work to arouse a variety of conflicting feelings (see Appendix B). These were read out to the subjects in conditions 1, 2, and 4. They were asked to describe how they would feel in each case and their responses tape-recorded. Examples of the items are:

Item 1: Now, try to picture yourself a parent, lying in bed trying to get to sleep. You've got a five year old son, Tommy, who has just come down with mumps. He's in the bedroom next to yours, crying because he feels so bad. How would you feel?

Item 6: Imagine that you are driving along a road and a young child, about four or five, runs out in front of the car. You just manage to avoid hitting the child and pull over to the side of the road. You see the child's mother yelling at the kid for having run into the road. How would you feel?

4. PROCEDURE.

Subjects were all seen individually by the same female
experimenter. They were asked to sit at a desk facing the experimenter, and the following introductory statement was made: "I am doing some research on individual differences in attitudes, and mostly what I'll be asking you to do is to fill out some questionnaires."

Subjects in the three conditions requiring interviews (experimenter self-disclosure, verbal reinforcement and control interview conditions) were then told: "First of all, though, I am going to describe a variety of situations to you and ask you to tell me how you would feel if you were in each one. With your permission, I'll record this on this tape recorder." The items of the interview were then read out to the subject by the experimenter, and repeated on request. In condition 1 (experimenter self-disclosure), the experimenter followed the subject's response to each item by a brief description of how she would feel in that situation. In condition 2 (verbal reinforcement), each self-referent affective statement by the subject (e.g. 'I'd be angry', 'I would feel frightened') was reinforced by an "uh huh" by the experimenter. In condition 3 (control interview), there was neither experimenter self-disclosure nor selective reinforcement, although a minimal amount of reinforcement was maintained with an "uh huh" at the end of each response.

Subjects in condition 3 (direct instructions) were given the following instructions in lieu of the interview. "Obviously, what I get out of these questionnaires is directly related to how honest you are when you fill them out. So I'd like you to
make a real effort to be as open and honest as you can while you fill them out, so that the results I get will be as valid as possible."

All subjects were treated identically from this point on (subjects in condition .5 - no interview - went straight from from the initial instructions to the testing stage). The first test administered was the modified form of the Rep. Test. Subjects were told "This first questionnaire is slightly different from the rest, and I'll show you how it works. First of all we need to choose seven people whom you know. Four of these are already given: your self - how you see yourself now; your ideal self - how you would most like to be; your mother, and your father.". Two-inch cardboard squares with these names printed on them were laid out in front of the subjects. They were then told "For the next three names, I'll give you a description and ask you to give me the name of a person you know who fits that description.". Each of the three remaining element descriptions were read out to the subjects and their responses written down on two-inch squares of cardboard. Subjects were then told "I am going to show you these three at a time, with your \"self\" in each set. Each time, I want you to tell me one way in which two of the three are alike and the third one is different. For example, here is the first one: can you tell me any way in which two of these are alike and the third one is different?".

All fifteen possible combinations were given to the subjects in the same random order. Their responses were recorded
in triplicate on sheets consisting of fifteen six point rating scales with space for the bipolar constructs on either side.

Once all fifteen constructs had been elicited, subjects were told "Now I would like you to rate yourself on each of these scales.". They were handed the top sheet and shown how to use the scales using one of the constructs elicited: "For example, if you see yourself as very (independent), you'd put a cross here. On the other hand, if you see yourself as very (dependent), you'd put a cross here. This space represents somewhat (dependent) and this somewhat (independent). These two in the middle represent a little (dependent) and a little (independent). Do you understand?". Once the subjects had completed this sheet, they were handed the next one and told, "Now I'd like you to do the same thing, but this time for your ideal self, that is, how you would most like to be on all of these scales.". Once this was done, they were told, "Finally, I'd like you to complete this sheet in the same way, but this time rating me on each of these scales."

Subjects were then told, "Now I would like you to fill in the rest of these questionnaires. Be sure to read the instructions attached to each one before filling them out. If there's anything you don't understand, please ask me.". They were handed the remaining questionnaires in the following order - first the Marlowe-Crowne and FNE which had been combined into one form by randomly intermingling the items so as to decrease the tendency for response set formation and shorten the administration time, second the STAI and finally the ACL.
Once they had completed these, the true nature of the experiment was explained to them and any questions they had were answered.
Hypotheses

(1) Subjects' openness, as measured by the number of adjectives checked on the adjective checklist, scores on the Marlowe-Crowne Social Desirability Scale, self-ideal self discrepancy on the adjective checklist and the Repertory Test, and the number of psychological constructs on the Repertory Test, will be increased by all three experimental manipulations (Conditions 1, 2, and 3) as compared with the two control conditions (Conditions 4 and 5). Within this a) subjects in condition 1 (experimenter self-disclosure) will show greater openness than those in conditions 2 and 3 (verbal conditioning and direct instructions) and b) subjects in the control interview condition (Condition 4) will show greater openness than those in the no interview control condition (Condition 5).

(2) Subjects' scores on the state anxiety scale and on the FNE were predicted to be lower for all three experimental conditions than for the control conditions, and within this to be lowest in the experimenter self-disclosure condition.

(3) A main effect of sex was predicted such that females will be more discloseive in general than males.

(4) An interaction effect of sex and conditions was predicted such that the experimenter self-disclosure and verbal reinforcement techniques will have a greater effect on male subjects than on females.
Statistical Analysis

An analysis of variance was carried out for each measure separately. An a priori decision was made to carry out the following additional orthogonal comparisons:

1. Conditions 1, 2 and 3 vs. Conditions 4 and 5
2. Conditions 1 and 2 vs. Condition 3
3. Condition 1 vs. Condition 2
4. Condition 4 vs. Condition 5

A factor analysis was carried out on the test scores to determine whether a common mediating factor was present.

Finally, the extent of the correlation between the scores obtained on each measure and the duration of the interview was determined.
Results

I. A series of anovas with multiple comparisons were carried out on each of the dependent measures.

(a) Measures of subject openness (see table 1). No significant condition effect was found for any of the six measures selected as indicators of subjects' willingness to disclose.

A tendency towards a main effect of sex was found for two of the dependent measures - disclosiveness of the Rep. Test constructs chosen (p=0.08) and the discrepancy of the self-ideal self ratings, again on the Rep. Test (p=0.07), with female subjects scoring higher than male subjects.

Condition - sex interaction effects were found for three of the dependent measures: the total number of adjectives checked as representative of "self" on the ACL (ACLSELF, p=0.05), the number of negative adjectives checked, again on the self section of the ACL (ACLNEG, p=0.04), and to a certain extent on the self-ideal self discrepancy on the Rep. Test (RT S-IS, p=0.10). Anovas were carried out on these three measures for each sex separately (see table 2).
<table>
<thead>
<tr>
<th></th>
<th>SCORE</th>
<th>MC</th>
<th>ACSELF</th>
<th>ACLNEG</th>
<th>RT S-IS</th>
<th>ACL S-IS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONDITION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>123-45</td>
<td>0.48</td>
<td>0.30</td>
<td>0.89</td>
<td>0.48</td>
<td>1.68</td>
<td>0.25</td>
</tr>
<tr>
<td>12-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.09*</td>
<td>0.12</td>
<td>0.54</td>
<td>0.89</td>
<td>3.31*</td>
<td>1.77</td>
</tr>
<tr>
<td><strong>COND.X SEX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.33</td>
<td>0.66</td>
<td>2.49**</td>
<td>2.56**</td>
<td>2.04*</td>
<td>0.43</td>
</tr>
<tr>
<td><strong>SEX/123-45</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.33</td>
<td>0.08</td>
<td>0.85</td>
<td>0.19</td>
<td>0.98</td>
<td>0.39</td>
</tr>
<tr>
<td><strong>SEX/12-3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.01**</td>
<td>1.47</td>
<td>0.11</td>
<td>1.67</td>
<td>0.08</td>
<td>0.78</td>
</tr>
<tr>
<td><strong>SEX/1-2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.00</td>
<td>0.31</td>
<td>9.00***</td>
<td>6.14***</td>
<td>7.65***</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>SEX/4-5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.27</td>
<td>0.75</td>
<td>0.25</td>
<td>2.38</td>
<td>0.01</td>
<td>0.65</td>
</tr>
</tbody>
</table>

* $P \leq 0.10$

** $P \leq 0.05$

*** $P \leq 0.01$
**TABLE II**: Separate Sex Anovas For Measures Of Self-Disclosure (F Values).

<table>
<thead>
<tr>
<th></th>
<th>ACLSELF</th>
<th>ACLNEG</th>
<th>RT S-IS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COND.</strong></td>
<td>2.27*</td>
<td>2.08*</td>
<td>3.37**</td>
</tr>
<tr>
<td>123-45</td>
<td>0.40</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>12-3</td>
<td>0.05</td>
<td>1.65</td>
<td>1.08</td>
</tr>
<tr>
<td>1-2</td>
<td>8.26***</td>
<td>6.51***</td>
<td>12.32***</td>
</tr>
<tr>
<td>4-5</td>
<td>0.38</td>
<td>0.72</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>FEMALES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COND.</strong></td>
<td>1.09</td>
<td>1.14</td>
<td>0.41</td>
</tr>
<tr>
<td>123-45</td>
<td>0.23</td>
<td>0.04</td>
<td>1.06</td>
</tr>
<tr>
<td>12-3</td>
<td>0.48</td>
<td>0.37</td>
<td>0.38</td>
</tr>
<tr>
<td>1-2</td>
<td>1.83</td>
<td>1.22</td>
<td>0.20</td>
</tr>
<tr>
<td>4-5</td>
<td>1.79</td>
<td>2.93*</td>
<td>0.03</td>
</tr>
</tbody>
</table>

* $p \leq 0.10$
** $p \leq 0.05$
*** $p \leq 0.01$
For males, this yielded a significant condition effect for one measure, self-ideal self discrepancy on the Rep. Test ($p=0.02$), and a tendency towards significance for the other two ($p=0.08$ for total adjectives checked and $p=0.09$ for negative adjectives checked on the ACL). The orthogonal comparisons indicate that this results from the differences in scores between conditions 1 and 2, with condition 2 scores being significantly greater than the condition 1 scores and all other scores being intermediate and nonsignificant.

For females, no significant condition effect was found for any of the three measures.

Finally, a significant interaction effect was found for the comparison of conditions 1 and 2 with condition 3 for the disclosiveness score of the constructs chosen for the Rep. Test. In this case, scores for conditions 1 and 2 were significantly greater than scores for condition 3 with scores for conditions 4 and 5 being intermediate and nonsignificant. A separate sex analysis indicated a significant effect for males on this comparison ($p=0.05$), but not for females.

Thus it appears that, in general, females are more disclosive than males but that they are not significantly influenced by the treatment conditions. Disclosiveness of male subjects, on the other hand, is increased by verbal reinforcement and decreased by experimenter self disclosure.

(b) Anxiety measures (see table 3)

An interaction effect between subject sex and FNE scores
was found for the comparison of conditions 1, 2, and 3 with conditions 4 and 5 (p=0.05) such that female scores were greater in the experimental conditions over the control conditions and male scores were not. A further tendency towards a main condition effect was found in the comparison of conditions 1 and 2 (p=0.07), with condition 1 scores being significantly greater than condition 2 scores. These results are inconsistent with the Kopfstein and Kopfstein (in press) finding that high FNE scores are correlated with an increase in negative self-disclosure.

No significant differences were found for trait anxiety, whereas state anxiety scores showed a trend towards being significantly smaller for the three experimental conditions (1, 2 and 3) as compared with the two control conditions (4 and 5) (p=0.07). Thus clarification of the demand characteristics does have the effect of making subjects feel more comfortable.
TABLE III: Anovas With A Priori Comparisons for Anxiety Measures (F Values).

<table>
<thead>
<tr>
<th></th>
<th>STATE</th>
<th>TRAIT</th>
<th>FNE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONDITION</strong></td>
<td>0.71</td>
<td>0.33</td>
<td>1.28</td>
</tr>
<tr>
<td><strong>123-45</strong></td>
<td>2.72*</td>
<td>0.32</td>
<td>1.03</td>
</tr>
<tr>
<td><strong>12-3</strong></td>
<td>0.09</td>
<td>0.34</td>
<td>0.62</td>
</tr>
<tr>
<td><strong>1-2</strong></td>
<td>0.02</td>
<td>0.28</td>
<td>3.09*</td>
</tr>
<tr>
<td><strong>4-5</strong></td>
<td>0.00</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td>1.29</td>
<td>1.69</td>
<td>0.83</td>
</tr>
<tr>
<td><strong>COND X SEX</strong></td>
<td>0.80</td>
<td>0.16</td>
<td>1.28</td>
</tr>
<tr>
<td><strong>Sex/123-45</strong></td>
<td>0.57</td>
<td>0.12</td>
<td>3.79**</td>
</tr>
<tr>
<td><strong>Sex/12-3</strong></td>
<td>0.00</td>
<td>0.04</td>
<td>1.13</td>
</tr>
<tr>
<td><strong>Sex/1-2</strong></td>
<td>1.70</td>
<td>0.11</td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Sex/4-5</strong></td>
<td>1.23</td>
<td>0.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* p ≤ 0.10
** p ≤ 0.05
(c) Perception of the Experimenter (see Table 4).

An anova of the self-experimenter discrepancy scores obtained from the Rep. Test constructs revealed a significant interaction between condition and subject sex (p=0.003). A separate sex analysis revealed a significant main condition effect for males (p=0.007). The orthogonal comparisons indicate that this is primarily due to the discrepancy scores for condition 1 being significantly greater than those for condition 2 (p=0.001), although the differences between condition 4 and condition 5 scores also tend to significance (p=0.08), with condition 5 scores greater than condition 4 scores.

The ideal self-experimenter discrepancy scores, on the other hand, show a main condition effect on the comparison of condition 1 with condition 2 (p=0.05), with scores for condition 1 being lower than those for condition 2.

It thus appears that experimenter self-disclosure results in more positive perceptions of the experimenter, as compared with verbal reinforcement.
TABLE IV: Anovas, With A Priori Orthogonal Comparisons,

For Measures Of Subject Perception Of The Experimenter (F Values).

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>SELF-EXPR. DISC.</th>
<th>IDEAL SELF - EXPR. DISC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>123-45</td>
<td>0.82</td>
<td>1.56</td>
</tr>
<tr>
<td>12-3</td>
<td>0.21</td>
<td>0.04</td>
</tr>
<tr>
<td>1-2</td>
<td>1.01</td>
<td>1.30</td>
</tr>
<tr>
<td>4-5</td>
<td>1.92</td>
<td>3.90**</td>
</tr>
<tr>
<td></td>
<td>0.12</td>
<td>0.99</td>
</tr>
<tr>
<td>SEX</td>
<td>1.04</td>
<td>0.53</td>
</tr>
<tr>
<td>COND X SEX</td>
<td>4.31***</td>
<td>0.43</td>
</tr>
<tr>
<td>SEX/123-45</td>
<td>2.21</td>
<td>0.31</td>
</tr>
<tr>
<td>SEX/12-3</td>
<td>0.14</td>
<td>1.88</td>
</tr>
<tr>
<td>SEX/1-2</td>
<td>11.14***</td>
<td>0.00</td>
</tr>
<tr>
<td>SEX/4-5</td>
<td>4.24**</td>
<td>1.81</td>
</tr>
</tbody>
</table>

** P≤0.05

*** P≤0.01
In summary, the results suggest that:

(i) female subjects are in general more disclosive than males, but are not influenced by the experimental conditions;
(ii) the disclosiveness of male subjects was increased by verbal reinforcement and decreased by experimenter self-disclosure;
(iii) all three experimental conditions resulted in subjects feeling more at ease in the testing situation, but experimenter self-disclosure led to an increase in social-evaluative anxiety;
(iv) experimenter self-disclosure led to more positive ratings of the experimenter (i.e. the experimenter was rated as more like the subject's ideal self) than did verbal reinforcement.

II. A principal factor analysis with iterations was performed on the six measures of openness. The results are summarized in Table 5.

The two factors obtained were not readily interpretable in view of the high weightings of the two measures (ACLSELF and MC) on both factors. One thing is clear from this analysis, however, and that is that the measure of disclosiveness obtained from the Rep. Test is of a quite different nature than that obtained from the other measures. One difference which stands out is that the measure of disclosiveness obtained from the Rep. Test is one of depth of intimacy, with subjects choosing the level at which they wish to disclose, whereas the other measures take the level of intimacy as granted and assess the extent to which subjects disclose at that level. This is in accordance with the
distinction between breadth and depth dimensions of personality made by Altman and Taylor (1973).

**TABLE V: Factor Matrix Of Measures Of Self-Disclosure.**

<table>
<thead>
<tr>
<th>Measure</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCORE</td>
<td>0.17</td>
<td>-0.16</td>
</tr>
<tr>
<td>MC</td>
<td>-0.48</td>
<td>-0.23</td>
</tr>
<tr>
<td>ACLSELF</td>
<td>-0.63</td>
<td>0.67</td>
</tr>
<tr>
<td>ACLNEG</td>
<td>0.17</td>
<td>0.93</td>
</tr>
<tr>
<td>RT S-IS</td>
<td>0.40</td>
<td>0.10</td>
</tr>
<tr>
<td>ACL S-IS</td>
<td>0.94</td>
<td>0.15</td>
</tr>
</tbody>
</table>
III. The duration of the interview was correlated with all the dependent measures for the three groups with interviews. No consistent pattern of significance was found, indicating that this is not a variable of major importance in this case (see table 6).

**TABLE VI**: Pearson Correlation Coefficients Between Length Of Interview And Dependent Measures.

<table>
<thead>
<tr>
<th></th>
<th>COND 1</th>
<th>COND 2</th>
<th>COND 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCORE</td>
<td>0.16</td>
<td>0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>MC</td>
<td>-0.12</td>
<td>-0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>KNE</td>
<td>0.01</td>
<td>0.33</td>
<td>-0.05</td>
</tr>
<tr>
<td>STATE</td>
<td>-0.06</td>
<td>0.36</td>
<td>-0.36</td>
</tr>
<tr>
<td>TRAIT</td>
<td>-0.00</td>
<td>0.41*</td>
<td>-0.16</td>
</tr>
<tr>
<td>ACLSELF</td>
<td>0.18</td>
<td>0.31</td>
<td>0.27</td>
</tr>
<tr>
<td>ACLNEG</td>
<td>0.21</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>RT S-IS</td>
<td>0.27</td>
<td>0.13</td>
<td>-0.57**</td>
</tr>
<tr>
<td>IS-E DISC</td>
<td>-0.21</td>
<td>-0.01</td>
<td>0.18</td>
</tr>
<tr>
<td>S-C DISC</td>
<td>0.13</td>
<td>0.04</td>
<td>-0.19</td>
</tr>
<tr>
<td>ACL-S-IS</td>
<td>-0.13</td>
<td>-0.04</td>
<td>-0.33</td>
</tr>
</tbody>
</table>

* p≤0.10
** p≤0.05
Discussion

A clear interaction was found between sex of subject and the relative effects of verbal conditioning and of experimenter self-disclosure. Thus male subjects were found to become more disclosive following verbal reinforcement of disclosiveness in an interview, and, if anything, less so following modeling of disclosiveness; whereas female subjects remained unaffected by either condition, although they were more disclosive overall.

That females should be more disclosive than males is consistent with the literature in this area (Cozby, 1973; Little, 1967; Little, 1968). Although Kopfstein and Kopfstein's (in press) finding that females check off more negative adjectives was not supported by this study, the contrasting finding that females revealed a greater discrepancy between their perceived selves and their ideal selves supports Pedersen and Breglio's (1968) analysis that females choose a more intimate level of disclosure without necessarily using more words to do so.

The most obvious way of interpreting the results is in terms of an interaction between the experimenter sex, the subject sex and the conditions of experimenter self-disclosure and of verbal reinforcement of disclosiveness. The results indicate that verbal conditioning is more potent when the experimenter and subject sex differ than when they are similar; whereas modeling of self-disclosure seems to be more potent when the experimenter and the subject are of the same sex. Unfortunately, there has been very little research carried out
in this area. As far as demand characteristics are concerned, the ambiguity resulting from the experimental conditions should be independent of the experimenter and subject sex. It is possible, however, that the subject-experimenter sex interaction would influence the willingness of the subject to comply with the perceived demand characteristics - this, however, should result in a differential effect for condition 3 over conditions 1 and 2 which is not found.

Neither of the two studies which examined the influence of experimenter sex on the rate of verbal conditioning explicitly analyzed for an interaction between experimenter sex and subject sex alone (Binder, McConnell & Sjoholm, 1957; Sarason & Minard, 1963). Research findings based on the traditional modeling paradigm may only be cited indirectly in connection with a study such as this one where the desired response is not a direct imitation of the model's actions. However, Bandura (1971) suggests that characteristics such as the sex of the model may play a role in determining the effectiveness of the modeling when the value of the modeled behaviour is unclear, in which case same-sexed models should be more effective. The only study which has any bearing on this did indeed find that male children imitated male models more than female models, whereas female children imitated both sexes equally (Bandura, Ross, and Ross, 1971, p86).

Thus, although more evidence is clearly needed in this area, the research that has been done is sufficiently consistent to provide support for an interpretation of the data in terms of
an interaction between the conditions, the sex of the subject and that of the experimenter. This has important implications for the other studies in this area where experimenter sex is generally ignored, and subjects are of one sex only.

An examination of the anxiety measures taken suggests that far from decreasing social evaluative anxiety scores, experimenter self-disclosure increases them. It is reasonable to propose that this heightened fear of evaluation results in subjects being less open than they would otherwise have been.

Further, if one examines the intercorrelations of the self, ideal self and experimenter ratings on the Rep. Test, and if one assumes that the ideal self is relatively impervious to change by treatment effects, then it appears that experimenter self-disclosure, at least as far as male subjects are concerned, leads to a more positive perception of both the experimenter and of the self. That experimenter self-disclosure results in subjects feeling more positively about the experimenter and about themselves is of obvious therapeutic importance. As regards this study, however, it suggests that the measures of openness themselves, biased as they are towards disclosure of negative information, may be masking the effect of experimenter self-disclosure on subject openness. Thus if experimenter self-disclosure results in subjects feeling better about themselves, any increased openness will not be revealed in an increase in the number of negative statements they make about themselves.

Thus any modeling influence of experimenter self-disclosure may have been masked by two other effects: an increase in
social-evaluative anxiety and a measurement artifact related to the change in subjects' self-perceptions resulting from experimenter self-disclosure.

In conclusion, this study did not find support for the hypothesis that experimenter self-disclosure results in increased disclosure by subjects on tests administered subsequently. On the other hand, verbal reinforcement of self-referent statements by a female experimenter was found to have this effect for male subjects, although not for female subjects. Possible explanations of the lack of a modeling effect are discussed above and include the observations that experimenter self-disclosure led to both an increase in social-evaluative anxiety and more favourable self-perceptions in the subjects concerned. Primarily, however, this study provides a demonstration of how experimenter and subject sex may interact with the experimental conditions such that any findings based on only one combination of these variables has very limited generalizability.
Bibliography


Jourard, S. M. Self-disclosure: An experimental analysis of the


McAllister, A., & Kiesler, D. J. Interviewee disclosure as a function of interpersonal trust, task modeling, and interviewer self-disclosure. Journal of Consulting and Clinical Psychology, in press.


(1) 'self'
(2) 'ideal self'
(3) 'mother'
(4) 'father'
(5) 'someone that makes me feel good'
(6) 'someone who makes me feel uncomfortable'
(7) 'someone who makes me angry'
APPENDIX B : The Interview

1. Now, try to picture yourself a parent, lying in bed trying to get to sleep. You've got a five year old son, Tommy, who has just come down with mumps. He's in the bedroom next to yours crying because he feels so bad. How would you feel?

2. Again, I would like you to imagine yourself a parent, this time of an eight year old girl, Cathy. One day she is late coming home from school and is very upset when she gets in. You find out...she was picked up by a strange man and sexually molested. How would you feel?

3. Imagine this time that one of your parents dies and the other, now old and lonely, asks if he/she may come and live with you. No other member of the family is prepared to take them in and the alternative is an old age home. How would you feel?

4. Now imagine that you are down in Gastown and a woman, holding a sickly-looking child by the hand, both of them dressed in soiled, ragged clothes, comes up to you and asks you for money. How would you feel?

5. Imagine that you are in Safeways, doing some shopping and you notice an old age pensioner picking up a tin of catfood and slipping it in her pocket. She looks up to see you staring at her. How would you feel?
6. Imagine that you are driving along a road and a young child, about four or five, runs out in front of the car. You just manage to avoid hitting the child and pull over to the side of the road. You see the child's mother yelling at the kid for having run into the road. How would you feel?

7. Imagine that you have some object at home that is very precious to you - and breakable. A friend comes to visit, bringing her small child. The child starts to play with your precious object and you warn him to be very careful. Shortly after, he breaks it and immediately bursts into tears. How would you feel?

8. A friend of yours, someone you aren't very close to, offers to do you a small favour. Unexpected obstacles arise and it turns out s/he has to go a long way out of his/her way in order to fulfill his/her promise. Without your knowing it, the small favour has turned into a large favour - it would, in fact, have been easier for you to have done it yourself. How would you feel?
Appendix C: Samples of Experimenter Self-Disclosure.

Note: The experimenter responses in the condition of experimenter self-disclosure were not strictly standardized as it was felt that this would detract from the spontaneity and genuineness felt to be an important part of the variable of self-disclosure. However, all the responses were similar in content to those given below.

1. I'd be very upset - I'd feel so helpless since I'd presumably done everything I could to help him. I guess if he went on crying for a long time, I'd even start feeling angry - just because it was making me feel so bad and there was nothing I could do.

2. I'd feel sad - really sad that it had happened, as well as angry at the guy who did it.

3. I'd feel sorry for them but I'd feel reluctant to take them in since it often doesn't work out. I'd be angry at the rest of the family for putting me on the spot, too.

4. This happened to me once - and I really felt angry at the woman for dragging her child around like that.

5. I'd feel really sorry for her - and I'd feel pretty angry and upset because of the way old people are treated by our society.
6. I saw this happen once, and I know that my immediate reaction after the fear had died down was anger at the mother for yelling at the child and sympathy for the child who was obviously also frightened.

7. I'd probably be angry at the child's mother for not taking it away from him - and at myself, for the same reason. I'd feel sorry for the child himself, since he was upset and crying.

8. This happened to me quite recently, and I found I was quite angry with her for not telling me about it before she did it. I think it was because it made me feel I owed her a large favour, when I hadn't intended to. I was grateful too, of course, but I was surprised that I actually felt annoyed with her.