The thesis of Karen Ogg Smith is approved:

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Committee Chairman

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Dedicated to my children Dan, Rich and Peter with love and the hope that my accomplishments will serve as an inspiration for them to pursue their own dreams.
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ABSTRACT

GROUP VERBAL CONDITIONING AND GENERALIZATION EFFECTS

by

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Master of Arts in Psychology

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In recent years an extensive amount of research has been conducted to demonstrate the effects of verbal learning or conditioning. While the greatest attention has been focused on individuals, studies have demonstrated that the same principles are also effective with the group format. In this paper, verbal conditioning in a simulated group therapy session was studied and an attempt was made to demonstrate the effects of conditioning generalization. It was hypothesized that groups of 4 or 5 people could be conditioned to increase their verbalizations of a designated response class during the group discussion of a hypothetical problem situation. It was further hypothesized that effects of conditioning would continue beyond that situation and could be demonstrated
to exist by the use of pre-post measures of an alternate modality.

A total of 106 female Ss volunteered for 4 or 5 person discussion groups designated as "group discussion, problem-oriented". Ss were randomly assigned to the three experimental conditions: contingent reinforcement, non-contingent reinforcement and pre-post measures only. Contingent groups received positive reinforcement whenever they uttered the word "should". Non-contingent groups randomly received the same average number of reinforcements as contingent groups. Pre-post-only groups did not participate in group discussion. All three groups received written pre-post tests to assess rate of change of response class usage prior to and following conditioning sessions.

The results of this study indicate that verbal conditioning did not occur hence it was not possible to test the hypotheses under study.
INTRODUCTION

Clinical therapy is based on the ability to communicate with one another verbally or non-verbally. Of these two general categories, verbal communication is of the greatest interest both clinically and experimentally. This area has been approached experimentally under the broad label of verbal learning or conditioning. According to Krasner (1965) "Historically, verbal conditioning is a research technique that grew out of an unlikely marriage between animal-based Skinnerian operant conditioning and clinical interest in verbal behavior, especially as it occurs in psychotherapy."

Skinner (1957) has indicated that he considers human verbal behavior to follow the same general rules as other animal and human behaviors: "The extent to which we understand verbal behavior in a 'causal' analysis is to be assessed from the extent to which we can predict the occurrence of specific instances and, eventually, from the extent to which we can produce or control such behavior by altering the conditions under which it occurs."

A review of the literature (Kanfer, 1968) shows that verbal learning has been the subject of extensive research using a wide variety of subjects, conditions and measures involving many different combinations of
independent and dependent variables.

Using selective reinforcement, verbal behavior patterns have been manipulated over a variety of response classes both with individuals and groups. While the greatest attention has been directed toward individuals, studies have demonstrated that the same principles are also effective with the group format (Bachrach, Candland and Gibson, 1961; Liberman, 1970; Phillips, 1969). However, the number of studies in this particular area of verbal conditioning have been very few. The central purpose of this study was to supplement the limited amount of literature on group verbal conditioning.

Another area of interest in this paper which is directly related to the conditioning process for both individual and group subject pools concerns generalization effects, i.e., whether or not the treatment effect extends beyond the treatment session and into different stimulus situations. With groups particularly, few studies have reported significant results concerning these effects. Effects of conditioning have been reported as measured by an increase in the target response class during experimental sessions, but significant differences between pre-test and post-test measures for groups and individuals have been difficult to obtain (David, 1972; Rogers, 1960).

Two types of testing situations are generally used. One offers a limited choice of responses such as the
Taffel test and Taffel-type of test (Krasner, 1965) and is essentially a discrimination learning situation. The other type involves interviews, story telling and response class ratings taken from recordings of group therapy sessions (Krasner, 1958; Moore and Sipprelle, 1971; Ullman, Krasner and Collins, 1961). This format is essentially a free-operant situation. These two groups can be generally referred to as pre-post measures of either a structured, forced choice response type or an unstructured, free choice response type. When significant results have been cited, they tend to be found when subjects were allowed unstructured or free choice responses during the testing periods which were very similar or identical to the conditioning sessions. An exception was Harris (1972) whose study showed verbal conditioning as significantly related to arithematic performance after conditioning trials.

It seems, therefore, that there are problems with both types of tests. On one hand the pre-post structured measures are not reflecting the effects of conditioning beyond the experimental session and, on the other hand, the unstructured measures which obtain results appear to be seriously limited with regard to generalizability of findings (Sarason, 1957). Also, if the testing situation is very similar to the experimental session, the possibility exists that the experimenter may unintentionally
still be giving subtle cues and reinforcers to the subjects. In addition, if the post-test measures are given to the subjects as a group, they may be cueing each other. If post-testing is given separately, then participants are subject to different testing histories. The second purpose of this experiment then is to investigate and control for these problems. It was proposed in this study to use a structured stimulus for the pre-post measures similar to the conditioning stimulus situation, but to use a written rather than verbal response situation. This would control for subjects possibly cueing other subjects as to response, while holding constant intrasession histories.

The choice of the response class to be conditioned was based on indications from group therapy research that therapeutic benefits were not obtained until group members had progressed beyond the advice giving state (Yalom, 1970).

While significant results have been obtained in group sessions which have reinforced the verbal response class "giving opinions" (Aiken, 1965; Hastorf, 1965; Oakes, Droge, and August, 1961), this study was taken a step further. That is, the response class of "giving opinions" has been operationally defined as the word "should". This leaves no doubt in the reader's mind as to the experimenter's intention, but at the same time
allows the conditioning session to closely approximate the natural flow of group therapy sessions.

In summary, the purpose of this study was to modify group behavior toward more directive statements experimentally defined as an increase in usage of the word "should" while participating in a simulated group therapy session. Pre-post measures which were written versions of the conditioning session, i.e., giving solutions to personal problems, were used to determine whether the conditioning effects were transferred to another situation. Subjects were also given a personality measure, Rotter's I-E Scale (Rotter, 1966), and a brief questionnaire to assess awareness of the conditioning procedure. (See appendix D).
METHOD

Subjects and Experimenters

A total of 106 female California State University, Northridge students enrolled in beginning Psychology classes volunteered as Ss. Two female Es conducted the experimental procedure.

Design

A 2 x 3 factorial design was used. The two Es presented each of the three conditions four times generating a total of 24 groups. The dependent variable was a directive adverb, operationally defined as "should".

Four of five Ss were randomly assigned to each of the three groups. The experimental group, Condition I, was given the treatment condition of positive social reinforcement of "shoulds" using a smile and the words "good" and "that's fine" as the reinforcement whenever "should" was uttered.

Control group I; i.e., Condition II, was randomly given the same average number of reinforcements as experimental Ss during the treatment condition, thereby receiving non-contingent reinforcement. Control group II; i.e., Condition III, was given the pre- and post-test alone to assess changes in rate of "should" statements without the
treatment phase. To control for presentation order bias, the three conditions were assigned in random order to each E.

All three groups were given two written tests similar to Pierce and Dragagow (1969) Helpee Stimulus Expressions. One test was administered prior to treatment to determine the individual operant level for using the word "should" (Section I) and the other following treatment to determine if any change had occurred (Section III). Sections I and III consisted of 12 descriptions of hypothetical problem situations given in the first person format. The descriptions were then randomly assigned to the pre and post-tests, six to each and in random order. (See Appendices A & C). A separate group of 20 control subjects were given the pre and post-test alone to determine if one section pulled more "shoulds" than another and as a comparison for operant "shoulds" in the pre-test.

Experimental Procedure

The experimental task consisted of three parts of instructions given to the Ss prior to each section. Instructions to the Ss were as follows:

Thank you for coming. My name is __________. This experiment is a study which deals with problem solving techniques and will consist of three separate sections. I will explain each section and wait for you to finish it before I explain the next section. Section I is a short essay exercise which has no right or wrong answers. Briefly write a response or solution to each problem situation. After responding to
all of the problems, return the paper to me. Please put your name on the paper. Are there any questions?

Following any questions, the written test was handed out. After Section I had been collected, the treatment condition was introduced. Experimental Ss and control Ss for Condition II were given the same typed personal problem description. (See Appendix B). Instructions to Ss were as follows:

Section II of the experiment involves group discussion. I am going to give each of you a copy of another problem situation. After reading and thinking about the problem, I would like everyone to discuss possible solutions to the situation.

Following the reading, the E asked the group to offer comments. As the Ss gave their comments, the E looked directly at the person speaking, but focused her attention on the S utterance of "shoulds".

When anyone in the experimental group said "should" the E presented positive reinforcement. A neutral expression was maintained by the E during the other periods of the experimental treatment condition.

During this section of the procedure, control group I received random reinforcement of verbalizations. This occurred approximately every 1 to 2 minutes (based on average number of reinforcements given in the pilot study groups) regardless of what the Ss were saying. Fifteen minutes were allowed for the treatment condition for both groups. Pilot studies showed that groups would run out of responses at various time periods before the 15 minutes
ended; therefore, three priming questions were asked to stimulate further discussion and to equalize the conditioning session for all groups. In other words, Question 1 would be used until the discussion began to lag, then Question 2 would be given followed by Question 3 close to the end of the session. If Question 2 appeared to be stimulating enough discussion to fill the rest of the session, Question 3 would be artificially introduced rather than waiting for a lull so that all questions were used in all sessions.

The questions were:

1. What if the girl mentioned was a recently divorced 30-year-old woman who was pressuring him to get married?

2. What if his grades had already slipped from a B to a C average since he had started seeing her?

3. What if she were also making a play for his older brother and his parents were aware of it and he was not?

Instructions for the third and last section of the experiment were as follows:

Section III is the last part of the experiment and will be like Section I. Briefly write a response or solution for each problem, put your name on the paper and return the completed paper to me.

After Section III was completed, Ss were given the Rotter I-E Scale to determine if it could be used as a
predictor of responses to the experimental conditioning and a post experimental questionnaire was used to assess Ss awareness of the contingencies in the reinforcement hypothesis. After the papers were all returned, the Ss were asked not to discuss the experiment with anyone and thanked for their cooperation.

A cassette recorder was used during the verbal discussion period to assess reliability of reinforcement, chronological change during the treatment condition and for comparison with the post written test. This was also used to determine if there were any observable differences between Es as well as similarity or differences in group responses.
RESULTS

The results of the verbal condition session are summarized in Table 1. Cassette recordings of contingent and random reinforcement groups were used to determine the number of response class utterances over blocks of trials. Length of group sessions varied from six to sixteen minutes; therefore, it was necessary to analyze the data in terms of quarter segment averages. Each quarter constituted a trial block. Due to problems with the recording equipment, six of the sixteen taped treatment sessions were lost. However, since an equal number was unavailable for both the contingent and random reinforcement groups, this did not present further computational problems of uneven Ns. Of the available data left for analysis, the trend was strong enough and the loss of power small enough that indications were that had the data been retrievable, the results would not have been significantly changed.

The performance of each of the ten groups of four or five Es left was treated in the analysis as one E, i.e., total N=10. Data from both Es was combined for a total N=5 for the contingent groups and N=5 for the random or non-contingent groups.

Reliability of scoring for "should" verbalizations was 87% and was determined by using independent judges to
score a random sample of the total sessions. It was not possible to make a reliability check on the percentage of times the Es accurately reinforced the Ss since some of the reinforcements consisted of smiles and head movements while other reinforcements were verbalizations of "good" and "that's fine". When questioned, both Es seemed to feel that they had responded only to the designated response class for the contingent groups and at the appropriate times of every 1 or 2 minutes for the non-contingent groups. The cassette recordings generally upheld these intuitive feelings; i.e., there were no inappropriate verbal responses. However, had a video tape been used, a verifiable reliability check would have been made.

While only two treatments were involved it was necessary to compare the effects of the independent variable on the conditioning sessions at four different phases, thus a multivariate test of significance was appropriate. Hotelling's $T^2$ is an analogue of Student's $t$ which may be used to simultaneously test each dependent variable. This method was selected to test the difference between the means of the two groups at each of the four phases. It is well known that any Hotelling $T^2$ statistic may be converted to an $F$ ratio statistic. The dependent variable for this study was the frequency of utterance of the selected response class "should" over time.

The results, shown in Table 1 as determined by an
Table 1
Hotelling T^2 Results

<table>
<thead>
<tr>
<th>Source</th>
<th>T^2</th>
<th>F*</th>
<th>F**</th>
</tr>
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<tbody>
<tr>
<td>Conditioning Effects</td>
<td>2.259</td>
<td>0.353</td>
<td>5.19</td>
</tr>
</tbody>
</table>

*F = \frac{N_1 + N_2 - p - 1}{(N_1 + N_2 - 2)p}

**This is the critical F with α = .05 and 4, 5 df
Graph of Results
Average Response Rate for Contingent and Non-Contingent Groups

Contingent
Non-Contingent

Fig. 1. Trial Blocks
Table 2
Individual Group Means for Each Group And Each Treatment Type

<table>
<thead>
<tr>
<th>Group</th>
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<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Contingent 1</td>
<td>.75</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>2.50</td>
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<td>4</td>
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<td>5</td>
<td>.50</td>
</tr>
<tr>
<td>Total</td>
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</tr>
<tr>
<td>Non-Contingent 1</td>
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</tr>
<tr>
<td>2</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>1.33</td>
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<td>5</td>
<td>2.33</td>
</tr>
<tr>
<td>Total</td>
<td>5.66</td>
</tr>
</tbody>
</table>
analysis of the mean scores, revealed no significant difference between groups over the four phases (F = .35, d.f. = 4, 5, P = NS). Using Hotelling's $T^2$, confidence intervals were computed testing for significance of each phase separately. All contained zero and therefore were not significant.

A correlation was computed between trials I and IV for conditioning sessions. These results also indicated that the hypotheses of verbal conditioning and generalization were not supported ($r = .534$, d.f. = 8, t = NS).

Figure 1 shows the averages over trial blocks of rate of response for both treatment types. The curves are similar in shape and both show a large jump between trials III and IV which may be related to the insertion of the primer questions (See Discussion).

Table 2 shows the group means and the grand means of each treatment for quarter time segments of the conditioning sessions.

Four of the five contingent reinforcement groups increased. All five of these groups made some responses of the word "should" during the first quarter segment. Two of the five non-contingent groups made no "should" responses during the first quarter time period, therefore any response made after that time period would result in an increase when compared to the first segment thus artificially weighting the data in that direction. If these two groups
were deleted and the remaining three were averaged alone, the change scores would still show an increase over time from the first to the fourth quarter; however, the average gain is far less for the non-contingent group (.27) than for the contingent group (.41). These results are the reverse of when all five groups are used and compared and when the non-contingent group showed the greatest increase in the response class (.67 as compared to .41). Unfortunately, the missing data left the author with a very small N and the deletion of any more groups does not leave enough data for proper analysis. Also, if the total had been larger, there would have been no need to delete these groups since if they were indeed an artifact of the experiment, they would have averaged out.

Total discussion time for all contingent groups and all non-contingent groups were added together to see if one type of group had talked longer than the other type. The total for the non-contingent group was 51 minutes and for the contingent group 53 minutes.

Except for one response, Ss were not aware of the experiment as indicated by a post-treatment questionnaire. The single response indicated that the S guessed that the experiment had to do with verbal conditioning, but was unaware of the designated response class.
DISCUSSION

The results of this study indicate that verbal conditioning did not occur, hence it was not possible to test the hypotheses under study. Nor do the results show that the experimental design for testing generalization effects was not feasible since there was no way to utilize the pre-post measures without significant conditioning results.

The lack of significant results may be attributed to several independent or related possibilities. The most obvious possibility would be concerning the Es themselves. One E was relatively inexperienced in verbal conditioning techniques while the other was totally inexperienced. Practice effects for Es have been shown to have significantly different results (Brogden, 1962). This lack of experience may have complicated matters further in that they were not able to function as potent reinforcers for the Ss. That is, their lack of confidence may have been conveyed to the Ss in such a way as to equalize the relationship between the Es and Ss thus lowering their status value. Studies have demonstrated differences in conditionability as a function of E status as perceived by Ss (Coons, 1972).
A second alternative hypothesis is awareness of Ss. As assessed by a post conditioning questionnaire, only one of the 106 Ss indicated awareness that the experiment involved verbal conditioning and that S was unaware of the particular response class involved. High correlations between awareness and performance have been reported (Doctor, 1969). Also, perception of the demand characteristics of an experiment has been demonstrated to be an important factor in the outcome (Orne, 1962). Comments by the Ss giving their opinions as to the purpose of the experiment such as "To find out how people react to others' experiences or problems.", "To try and give first reactions to personal and world-related problems." and "To see the average opinion of everyday problems and statements." indicate that they felt the demand characteristics were their ability to express themselves honestly.

A third possibility is that the conditioning sessions were too short since the operant level of "should" verbalizations were far below those obtained in the pilot study. In this study in two of the ten instances there were no expressions of "should" made in the first quarter time segment. The inclusion of a baseline period in which a certain minimum number of "shoulds" occur or the use of a stooge to prime the Ss might circumvent this problem.

It was earlier noted that in Figure 1 the patterns of the two treatment types during group discussion sessions
were characteristically similar. The possibility exists that the increase of "shoulds" for both groups in trial block IV might be a function of an increase in overall verbal participation; i.e., expression opinions, which would affect other response classes as well.

The particular jump between trials III and IV might also be related to the order of the primer questions which unfortunately were not counterbalanced to control for the possibility that a particular question might be demonstratively more evocative than the others. If it was only a cumulative effect, counterbalancing would have at least eliminated this alternative.

In conclusion, the results of this experiment did not demonstrate verbal conditioning in a group setting. Alternative explanations for these results include inexperienced Es, low status of Es, lack of S awareness of demand characteristics of the situation and low operant level of the response class. In addition, it was suggested that counterbalancing of the primer questions would have controlled for any significant differences in power to evoke "should" responses among these questions. A future study of this nature would control for the above problems, but it nevertheless was one "hell" of a learning experience for the author.
REFERENCES
REFERENCES


APPENDIX A

Written Pre-Test

Section I

1. I don't know if I am right or wrong, but I find myself pulling away from people. It seems like a lot of people play games and I find it very depressing to pretend an interest in them when I don't feel it.

2. I love my parents very much, but I'm caught between them. Mother wants me to go to the college she graduated from, but Dad says it's a waste of time and money. I wouldn't mind if that were the real reason, but I think he is saying that because he couldn't go to college and feels left out.

3. I'm sick and tired of having to support a materialistic wife and two spendthrift teenagers. After 20 years the pressures of my home and my job make me hate to get up in the morning and hate to come home at night. And the first thing I do after work is to start drinking. I feel like I'm falling apart and there's nothing I can do.
4. I'm getting very worried about being a good mother. I want my children to grow up to be self-reliant, but I find myself constantly restricting them because I'm afraid they'll hurt themselves. I love them very much and I know this isn't good, but I can't stop myself from being so protective.

5. I'm a college freshman and I live with my mother who recently got divorced. She's happier than she's been for a long time, but now she's on a youth kick to make up for lost time, I guess. I can understand a little how she feels, but now she's after my boyfriends. I tried to talk to her about it, but she says I'm imagining things.

6. This may sound dumb, but I don't like to feel I have to try to sleep with a girl on the first date or any date for that matter. I like sex a lot, but not all the time. It would be such a relief to just have a date with a girl and not feel I had to perform at the end of the evening.
I am a 20 year old college student who lives at home with his parents. I had planned to move out when I graduated, however, recently my parents have put a lot of pressure on me to stop seeing a girl I like very much. I don't want to hurt my parents, but I also don't want to see her behind their back. I could move out, but my parents feel that it would be better for me to wait until I graduate because of the expense involved. I am concerned that if I took a job right now, I might not be able to keep up my grade average.
APPENDIX C

Written Post-Test

Section III

1. I'm almost nineteen and I've only taken a girl out on a date twice--both times were blind dates with another couple who arranged the date. I like girls, but I'm very uncomfortable around them and usually I can't think of anything to say. What's worse, my shyness comes off like I'm conceited so girls tease me about being stuck up.

2. I love my husband and children very much and most of the time I don't mind doing housework even though it can be boring. My problem seems to be that lately everything I hear and read is praising the new liberated woman and I'm beginning to feel like something is wrong with me because I don't fit that image.

3. I'm a C+ student, but I could be making straight As if only I wouldn't put off studying until the last minute. I know what's happening, but I still can't seem to get started until the pressure about a paper or exam builds to a point where I'm nasty to everyone around me and the due date is only a day or two away. Then I start working, but also I start putting myself down for wasting so much time.
4. It seems like anytime someone compliments me I end up thinking up reasons why I don't deserve the praise. If I can't think of a particular reason, I usually fall back on "Well anyone could have done it". I love to hear good things about myself, but I don't know how to take compliments.

5. I live with a guy who is really great except that he's so busy working and going to school as well as playing basketball and sailing that he doesn't have much time left for me. I go to school, too (and make good grades) and do all the cooking and cleaning, but I have lots of time left over that I'd like to be spending with him, if he were only around. I'm beginning to feel like I'm married.

6. My girlfriend and I broke up about 3 months ago because suddenly we seemed to be always arguing. I don't like to argue and couldn't understand why we had so much trouble until recently when I found out that her best friend had deliberately set out to break us up. I still love her, but I'm very afraid of getting involved again.
APPENDIX D
Rotter I-E Scale

Name _________________________

Attitude Questionnaire

1. a. Children get into trouble because their parents punish them too much.
     b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people’s lives are partly due to bad luck.
     b. People’s misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don’t take enough interest in politics.
     b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.
     b. Unfortunately, an individual’s worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
     b. Most students don’t realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
     b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try, some people just don’t like you.
     b. People who can’t get others to like them don’t understand how to get along with others.
8. a. Heredity plays the major role in determining one's personality.
    b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen.
    b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student, there is rarely if ever such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
    b. By taking an active part in political and social affairs the people can control world events.
18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There really is no such thing as "luck".

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends on how nice a person you are.

21. a. In the long run, the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.
28. a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run, the people are responsible for bad government on a national as well as on a local level.
APPENDIX E
Assessment Questionnaire

Name: ______________________

1. What did you think the purpose of this experiment was?

2. Did you usually give the first solution that came into your mind?

3. How did you decide which solution to give?

4. While you were discussing the problem, did you think you were supposed to give a particular kind of solution?

   If so, what?

5. Did you notice anything about the experimenter while you were discussing the problem as a group?

   If so, what?

6. Did you notice that he said anything?

   If so, what?
7. Did you think the experimenter wanted anything in particular from you?

If so, what?