Differential Stigma of Two Models
of Mental Disorder

An Honors Thesis (ID 499)

by

Dale A. Gyure

Thesis Director

Michael D. Board, Ph.D.

Ball State University

Muncie, Indiana

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Differential Stigma of Two Models of Mental Disorder

Throughout history, sufferers of mental disorders have been the victims of severe stigmatization and discrimination. Such people were thought to be possessed by evil spirits or demons, or controlled by the moon, and were thus subjected to various "cures" such as torture, neglect, exorcism, and even execution. But during the Eighteenth Century a different conception of the etiology of mental disorder gained favor. Disorders began to be attributed to a disease process, thus implicating a somatic cause, and, consequently, a somatic treatment. The disease concept remains by far the most popular explanation of mental disorder to this day, and it has been responsible for the use of such therapeutic treatments as lobotomy, electric shock, insulin shock, and psychoactive drugs.

It is not clearly known if the general public shares this belief about the biological nature of mental disorder (Nunnally, 1961). However, it is known that the public harbors a very definite negative attitude toward people who suffer from mental disorders. A review of public opinion on this issue by Rabkin (1972) states that "mental patients have taken the place of lepers as targets of public disgust, dislike, and rejection" (p. 154).

A number of experiments have been conducted which serve to delineate the attitudes of subjects toward mentally disturbed
individuals, and the results of these studies show a uniformity of attitudes such as fear, dislike, and mistrust (Eisdorfer & Altrocchi, 1961; Olshansky, Grob, & Malamud, 1958; Farina & Ring, 1965; Farina, Thaw, Lovern, & Mangone, 1974). A survey by Nunnally (1961) discovered that the public, when presented with a list of adjectives, described mental patients as worthless, dirty, dangerous, and unpredictable; a parallel finding was that the more severe the disorder, the more negative the perceptions of the public. Other studies have found that employers are more likely to offer jobs to "normal" people than to people who have been in a mental institution (Farina & Felner, 1973), and that people believe their neighbors will not respond favorably to mental patients entering the neighborhood (Farina, Thaw, Lovern, & Mangone, 1974).

Supporters of the disease model of mental disorder believe that the stigma ascribed to mentally disturbed individuals will be lessened by an explanation which presents a physical etiology for the disorder. It is the belief of such proponents that the public will view more favorably an explanation in which the disorder occurs outside of the control of the sufferer. A mentally disturbed individual is therefore not responsible for his condition since it is due to physical abnormality, just as a person suffering from leukemia does not bear responsibility for his disease. Consequently, this medical model of mental disorder regards medical therapy, usually in the form of drugs, as the only avenue to recovery for the mental patient.
The popularity and professional acceptance of the disease concept of mental disorder can be seen in the existence of such programs as Alcoholics Anonymous. However, no research evidence has been gathered to support the claim that a medical model explanation reduces the stigma attached to mental patients. Instead, it appears that a social learning explanation is more beneficial. The social learning conception of mental disorder states that maladaptive behavior is the result of modeling or improper reinforcement. For example, alcoholism could be caused by the reinforcing effects of the alcohol when used in stressful situations, or by the modeling of alcoholic behavior (learning how to drink from watching parents). Alcoholism is thus viewed by the social learning model as a totally learned behavior with no biological influences. Implicit in this model is the belief that any individual with a mental disorder is perfectly capable of having his inappropriate behavior modified or replaced, since the cause of the behavior is environmental and the environment can be controlled.

Several studies directly comparing the medical and social learning models of mental disorder have found less stigma is attached to an individual when his disorder is described using the social learning explanation (Ommundsen & Ekeland, 1978; Pisano & Sanders, 1982; Rothaus & Morton, 1962; Rothaus, Hanson, Cleveland, & Johnson, 1963). Two additional studies (Farina, Fisher, Getter, & Fischer, 1978; Fisher & Farina, 1979) have found that the
beliefs of college students can be easily manipulated toward either the social learning or the medical explanation.

The study reported in this paper was an attempt to extend the findings of the above studies comparing the medical and social learning models. This experiment investigated the topic in a manner which differed from previous inquiries. First, the present experiment looked at two disorders (schizophrenia and antisocial personality) which had not been previously studied, in order to determine whether beliefs about the causes and treatment of a disorder are consistent across all categories of mental dysfunction or are different with specific disorders. In other words, does the public view schizophrenia as a medical problem and antisocial personality as a learned set of behaviors? Another difference between the present study and previous experiments was the inclusion of a more realistic means of presenting the disorders. In this study, videotapes were made with two people role-playing a psychological interview; these tapes were then shown to subjects. Previous experiments had utilized less realistic presentations, such as printed scripts or audiotapes. Also, a stronger manipulation of the independent variables (disorder, explanation) was presented through the use of written descriptions. Each description provided an explanation for one of the two disorders, and this explanation was based on either the medical model or the social learning model. Subjects read one of the descriptions and then watched the videotape which contained the appropriate disorder.
Finally, a control condition allowed a comparison to be made between the medical or social learning explanation and a symptoms-only presentation. Theoretically, neither explanation of a disorder should be more stigmatizing than the control condition.

The beliefs and attitudes of the subjects and the degree of stigmatization they attached to a presentation were assessed by a questionnaire, which was developed along a series of dimensions suggested by previous research. The questionnaire was completed by the subjects after they had first read one of the two- to four-page descriptions and then viewed one of the two videotapes.

The overall goal of the study was to determine the most effective and beneficial way in which individuals with mental disorders can present themselves and their problems to the public. Based on previous research, it was hypothesized that there would be less stigma attached to an individual who presented his problems using a social learning explanation as compared to a medical explanation. This topic is an important one because of what has already been learned about public attitudes toward mental patients. Persons with a mental disorder already have a large amount of stigma attached to themselves by the public, so it is important to find a way for such individuals to lessen the risk of further prejudice. It is hoped that investigations such as the study presented here will lead to the discovery of the most beneficial way for persons with mental disorder to present themselves, and maybe even to find a way to reduce the negative attitude of the
public toward the mentally disturbed, if that is possible in our society.

**Method**

Two variables were investigated in this study: the type of mental disorder presented and the way in which it was presented. A 3 x 2 between-subjects MANOVA design was used: Model (medical model, social learning model, control) x Disorder (schizophrenia, antisocial personality).

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**Subjects**

The subjects were 180 undergraduate students, most of whom were enrolled in various psychology classes at Ball State University. The sample sex ratio was 129 females and 51 males. Subjects either signed up for the experiment to receive possible credit in a psychology class or were personally recruited by the experimenter. The ages of subjects ranged from 17 to 53, with a median of 19. Subjects were required to sign a consent form but could refuse to participate without penalty; none of the subjects chose this option. After the experiment was completed the logic and design were explained to the subjects and they were given an opportunity to ask any questions. A total of 30 different subjects were each given one of the six presentations (see below), and no subject received more than one disorder-model presentation.
Procedure

All subjects received the same standardized instructions, which were left purposely vague to avoid biasing the subjects toward the medical or social learning models. Subjects were told only that they were to observe a videotape of a psychological interview and afterward answer a questionnaire dealing with their reactions to the interview. No mention was made of the status of the interviewer or the interviewee, of the location of the interview, or of the context. The subjects were then given a short informational outline which presented an explanation of a disorder (schizophrenia or antisocial personality) using the medical model, the social learning model, or a control explanation which merely described the disorder and offered no explanation. After reading the outline, subjects were shown a videotape which depicted either a schizophrenic or a person with antisocial personality disorder. Emphasis was placed on reading the outline carefully and attending closely to the interview in order to strengthen the manipulation of the model. Questionnaires were administered following the completion of the videotape. When all questionnaires were completed and collected, the hypothesis of the experiment was explained to the subjects and they were given the opportunity to ask any questions concerning the study or their participation.

Description

The study used six different outlines to inform subjects about the disorders and provide the manipulation of the models.
For each disorder there were three outlines, one for each model (schizophrenia, social learning, control). Thus, a total of six outlines were prepared. Subjects in an experimental session were given one of the three possible outlines which corresponded with the particular disorder they would view. Subjects were informed to read their outline carefully and were given as much time as necessary to finish reading.

The schizophrenic outlines listed a number of common symptoms, such as disorders of thought and language, disorders of perception, and disorders of emotion. The symptoms were followed by an explanation of the cause of schizophrenia, except in the control outline, where only the symptoms were presented. In the social learning outline, schizophrenic behavior was described as being the result of inadequate learning, particularly from the family. The medical outline explained schizophrenia as being based on genetics or physical abnormalities. Both schizophrenic outlines then cited many references to support the explanatory model. For example, in the medical outline, studies which found excessive dopamine activity in schizophrenics were offered as evidence; in the social learning outline, research on deficient family communication in families of schizophrenics was listed. Both versions of the schizophrenic outline ended with a description of treatment methods. The medical model outline claimed that drug therapy, especially Thorazine, is effective in suppressing schizophrenic symptoms. The social learning version presented behavior modification and family therapy as treatments for schizophrenia.
There were also three versions of outlines for antisocial personality disorder. The control version merely listed symptoms, such as unreliability, impulsiveness, lack of a sense of shame or guilt, and lack of emotions. These symptoms were also listed in the medical and social learning versions. The medical outline then described the causes of antisocial personality as either genetics or physical abnormalities, while the social learning outline blamed inadequate learning in childhood. The medical outline continued with a description of studies which support the disease concept of antisocial personality, including studies of inheritance and of EEG abnormalities. The treatment recommended by the medical outline was drug therapy, utilizing stimulants to raise the arousal level of the antisocial person. In the social learning outline, research on the topics of family problems and modeling was provided to justify the social learning approach. The treatment for antisocial personalities proposed by the social learning outline was behavior modification.

**Videotapes**

Two different videotapes were used in the study to represent the manipulation of the two disorders. Both tapes were filmed at the Student Counseling Center and included the same two people. The "interviewee" was played by a 27 year old white male and "interviewer" was a 53 year old white male who works at the university mental health center as a clinical psychologist. Each of these confederates was chosen because of their unfamiliarity to
students due to infrequent visits to campus. Throughout the videotapes, the entire bodies of the confederates were visible, and they sat face-to-face approximately 10 feet from the camera. The tapes were shown to subjects through a 23 inch black and white television monitor at a sound level which was clearly audible throughout the room. Subjects saw no more than one of these videotapes.

The interviewer asked approximately the same set of questions in both the schizophrenic and antisocial tapes, and the interviewee responded according to the disorder that the tape represented (see Appendix A). In the antisocial personality tape the interviewee spoke of having problems on the job, with the law, with his ex-wife, and in school as a youth. The interviewee admitted to having previously seen a professional about his problems, where he was diagnosed as having an antisocial personality. In the schizophrenic tape, the interviewee acted lethargic and confused, and took longer to answer questions. The interviewee complained of hearing voices and told of problems in school as a child. He also spoke of previous visits to a "professional" who had diagnosed him as a paranoid schizophrenic. In both tapes the interviewee related that seeing the "professional" had helped him with his problems, but that he had to stop the sessions because he moved to a new location. Specific treatments were not discussed in either tape but rather were presented in the outline that subjects read prior to viewing the tape (see "Descriptions"). However, in both tapes
the interviewee explained that he had learned more about himself and his problem from the previous sessions with the "professional," and at the end of each tape the interviewee said that he believed this knowledge would be the key to his future improvement.

**Questionnaires**

All subjects answered a 19 item questionnaire after viewing the appropriate videotaped interview. The first four items were designed to serve as persuasion checks (e.g., "To what extent do you think the origin of this problem is a disease process?"; "To what extent do you think the solution of this problem is learning how to get along better with others?"). These questions measured whether or not the subjects were in fact persuaded by the presentation. The remaining 15 questions were intended to assess the amount of stigma that the subject associated with the presentation (e.g., "How likeable did you find this person?"; "To what extent would you desire to have this person as a friend?"), the amount of help the subject would be willing to offer the individual (e.g., "If this person asked you to help him with his problems, how likely would you be to do it?"; "How much help would you be willing to give this person?"), and the seriousness of the individual's problem (e.g., "How serious is this person's problem?"; "How likely is it that this person may need help now or in the future?"). A Likert scale format was used on the questionnaire. Seventeen questions, which measured subjects' attitudes, utilized a five-point scale. The remaining two questions, which
concerned the amount of time needed before improvement would occur, used a seven-point scale. The questionnaire responses were factor-analyzed using Kaiser's varimax rotation. This procedure was performed to identify the underlying dimensions of the questionnaire, in order to avoid redundancy.

**Results**

Factor analysis of the questionnaire responses of all subjects resulted in the identification of seven factors. These factors explained 65.73% of the total variance of responses, with each factor accounting for between 6% and 14% of the total variance. The factors, and the questionnaire items which loaded on these factors, can be seen in Table 2.

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Insert Table 2 about here

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Factor scores for each subject were created for each of the seven factors. These factor scores were then used as dependent measures in a $3 \times 2$ factorial MANOVA. The independent variables were the model presented (medical, social learning, control) and the disorder presented (antisocial personality, schizophrenia).

Analysis of factor 1 ("Likeability") showed significant disorder differences ($F = 7.42, df = 4,171, p < .0001$). Subjects liked the schizophrenic confederate more than the antisocial personality confederate ($p < .001$). The schizophrenic was also more likely to be desired as a friend, more likely to be desired as a co-worker, and was seen as more likeable to others (all $p < .01$).
Significant model differences on factor 2 ("Medical Persuasion") were obtained ($F = 4.75, \text{df} = 4,346, p < .001$). Post-hoc Tukey analyses showed that subjects receiving the medical model were more persuaded toward a medical explanation of the disorders than subjects exposed to either the social learning or control descriptions ($p < .05$ for both questions), while the latter two groups did not differ.

Factor 6 ("Social Persuasion") indicated a strong disorder effect ($F = 6.14, \text{df} = 2,173, p < .01$). Subjects believed antisocial personality disorder to be more of a social learning problem than schizophrenia ($p < .01$ for both questions).

Significant disorder differences on factor 7 ("Unnamed") were also obtained ($F = 3.60, \text{df} = 2,173, p < .01$). Subjects reported that they would be more likely to seek help if they had schizophrenia than if they possessed an antisocial personality ($p < .01$).

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Insert Table 3 about here

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**Discussion**

The results obtained in this study are generally different than those of recent research comparing the medical and social learning explanations of mental disorder. There appears to be no advantage in using either of the explanations to reduce the stigma of schizophrenia and antisocial personality. Amount of stigmatization did not significantly differ among the three models used to
explain mental disorder; thus, the experimental hypothesis must be rejected.

Questionnaire responses of subjects indicated that they found the schizophrenic confederate more likeable and desirable as a friend and co-worker than the antisocial personality confederate. This finding is in contrast with the results of Nunnally (1961), who found the greatest amount of stigma attached to psychotics. Methodological differences between the two studies may account for the discrepancy in the findings. In the present study, subjects were able to view the confederate on a videotape, whereas in the Nunnally experiment subjects read written descriptions. This increased exposure may have resulted in greater likeability, since the confederate could be seen as a unique individual and not just described via a second-hand account, which might elicit stereotypical responses.

Subject responses also revealed that they accurately perceived the medical explanation as more medical in orientation than the control and social learning explanations. However, this was the only model effect found in the results. The social learning explanation was not seen as more social in orientation than the medical or control explanations, indicating that subjects rejected the social learning model. This does not agree with the findings of Farina et. al. (1978), who found that college students' beliefs were easily manipulated toward either a medical or social learning explanation. Again, this may be due to methodological differences
between the two studies (written accounts vs. videotape presentations) or perhaps even to subject differences.

The antisocial personality disorder was perceived by subjects as more of a social learning-oriented problem than a medical problem, which was expected given the nature of the disorder. However, schizophrenia was not seen as either a medical or a social learning problem. Also, subjects reported that they would be more likely to seek help from a professional if they had schizophrenia than if they possessed an antisocial personality. This may demonstrate a greater fear of schizophrenia, a "mysterious" disorder, than of antisocial personality, which is seen as a more predictable, learning-influenced disorder.

Overall, subjects responded more to the disorders than to the explanations given for the disorders. There were no significant model effects for any of the stigmatization measures. Thus, it appears that there is no difference between using a medical explanation of these disorders, a social learning explanation, or no explanation at all. A possible reason for this deviation from previous research may be methodological differences. The present study involved a stronger manipulation of the disorders and explanations than was present in previous studies. This was accomplished through the use of a more realistic presentation of the confederate (videotapes) and a stronger presentation of the explanation (written description supported by research). It therefore seems that when disorders are presented in a more realistic
manner, explanations given for schizophrenia and antisocial personality are insignificant in terms of reducing stigma, and are no more effective than providing no explanation whatsoever.

The explanations used in the study were "expert" explanations; that is, the subjects were given research evidence from leading investigators which supported either the medical or social learning model. Perhaps self-explanations (given by the confederate himself) would result in a different outcome. Another possible reason for the difference between this study and previous research may be found in sex effects. The present study utilized an unequal ratio of males to females (129 females, 51 males). Thus, an overwhelmingly female viewpoint is represented in the results. Pisano & Sanders (1982) found sex differences in terms of perceived seriousness of disorders and willingness to help individuals with mental disorders; however, since there were no significant effects found on similar factors in the present experiment, the findings of the two studies may not be comparable.

The results of this study contradict the findings of previous research comparing explanatory models. Our results indicate that a person with schizophrenia or antisocial personality disorder may use either the social learning or medical explanations to describe their disorder without fear of increased stigmatization. However, further research into this topic should be conducted. Possible sex effects should be analyzed; this was not the case in the present study because of the small number of male subjects available. Self-explanations, given by the confederates, may also be employed
for comparison with outside or "expert" explanations. Different disorders should be investigated, including those which have been studied in previous research which utilized weaker manipulations. And a final possibility for further research concerns strengthening the variable manipulations even more. This could be performed by videotaping real mental patients or having them present themselves to subjects in person. All of these suggestions would be helpful in increasing our knowledge of the stigmatization of mental disorders, which is necessary in our attempt to help persons with mental disorders lead better, less troublesome lives.
References


Pisano, M., & Sanders, J. Differential stigma of two models of mental disorders. Unpublished manuscript, Ball State University, 1982.


Table 1

Experimental Design

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Model</th>
<th>Control</th>
<th>Medical</th>
<th>Social Learning</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td></td>
<td>N=30</td>
<td>N=30</td>
<td>N=30</td>
<td>N=90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9 male, 19 female)</td>
<td>(11 male, 19 female)</td>
<td>(9 male, 21 female)</td>
<td>(29 male, 61 female)</td>
</tr>
<tr>
<td>Antisocial</td>
<td>Personality</td>
<td>N=30</td>
<td>N=30</td>
<td>N=30</td>
<td>N=90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(13 male, 26 female)</td>
<td>(4 male, 26 female)</td>
<td>(5 male, 25 female)</td>
<td>(22 male, 68 female)</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>N=60</td>
<td>N=60</td>
<td>N=60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(22 male, 45 female)</td>
<td>(15 male, 45 female)</td>
<td>(14 male, 46 female)</td>
<td></td>
</tr>
</tbody>
</table>
Table 2

Results of Factor Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percent of Total Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 - &quot;Likeability&quot;</td>
<td>14.13%</td>
</tr>
<tr>
<td>Q 9  How likeable did you find this person?</td>
<td></td>
</tr>
<tr>
<td>Q 10 To what extent would you desire to have this person as a friend?</td>
<td></td>
</tr>
<tr>
<td>Q 11 To what extent would you desire to have this person as a co-worker?</td>
<td></td>
</tr>
<tr>
<td>Q 12 How likeable do you believe others find this person?</td>
<td></td>
</tr>
<tr>
<td>F2 - &quot;Medical Persuasion&quot;</td>
<td>10.00%</td>
</tr>
<tr>
<td>Q 1 To what extent do you think the origin of this problem is a disease process?</td>
<td></td>
</tr>
<tr>
<td>Q 3 To what extent do you think the solution of this problems is a medical treatment?</td>
<td></td>
</tr>
<tr>
<td>F3 - &quot;Helping&quot;</td>
<td>9.30%</td>
</tr>
<tr>
<td>Q 17 If this person asked you to help him with his problem, how likely would you be to do it?</td>
<td></td>
</tr>
<tr>
<td>Q 18 How much help would you be willing to give this person?</td>
<td></td>
</tr>
<tr>
<td>F4 - &quot;Seriousness&quot;</td>
<td>8.90%</td>
</tr>
<tr>
<td>Q 6 How serious is this person's problem?</td>
<td></td>
</tr>
<tr>
<td>Q 14 How likely is it that this person may need help now or in the future?</td>
<td></td>
</tr>
<tr>
<td>F5 - &quot;Knowledge&quot;</td>
<td>8.70%</td>
</tr>
<tr>
<td>Q 5 How much have you learned about this person as a result of hearing him on the tape?</td>
<td></td>
</tr>
<tr>
<td>Q 7 How much control does this person have over his problem now?</td>
<td></td>
</tr>
<tr>
<td>Q 8 To what extent do you believe that this person understands his problem?</td>
<td></td>
</tr>
<tr>
<td>Q 13 How predictable do you think this person is in interacting with others?</td>
<td></td>
</tr>
</tbody>
</table>

Table continues
## Factor Analysis Results

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percent of Total Variance&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6 - &quot;Social Persuasion&quot;</td>
<td>8.50%</td>
</tr>
<tr>
<td>Q 2  To what extent do you think the origin of this problem is difficulty in getting along with others?</td>
<td></td>
</tr>
<tr>
<td>Q 4  To what extent do you think the solution of this problem is learning how to get along better with others?</td>
<td></td>
</tr>
<tr>
<td>F7 - &quot;Unnamed&quot;</td>
<td>6.20%</td>
</tr>
<tr>
<td>Q 16 If this person does not seek help, how soon will he show some signs of improvement?</td>
<td></td>
</tr>
<tr>
<td>Q 19 If you had this problem, how likely would you be to seek help?</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

<sup>a</sup>Percentages listed are based on 100% total variance. The total amount of variance explained by the seven factors was 65.73%.
Table 3
Means and Standard Deviations of Questionnaire Responses

<table>
<thead>
<tr>
<th>Disorder Effects</th>
<th>Antisocial&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Schizophrenia&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1</strong></td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>Q 9</td>
<td>3.1889</td>
<td>.94875</td>
</tr>
<tr>
<td>Q 10</td>
<td>3.5778</td>
<td>.84256</td>
</tr>
<tr>
<td>Q 11</td>
<td>4.1222</td>
<td>.82679</td>
</tr>
<tr>
<td>Q 12</td>
<td>3.6333</td>
<td>.86221</td>
</tr>
<tr>
<td><strong>Factor 6</strong></td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>Q 2</td>
<td>2.4111</td>
<td>.80254</td>
</tr>
<tr>
<td>Q 4</td>
<td>2.3444</td>
<td>.85297</td>
</tr>
<tr>
<td><strong>Factor 7</strong></td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>Q 16</td>
<td>6.7222</td>
<td>.63714</td>
</tr>
<tr>
<td>Q 19</td>
<td>1.8778</td>
<td>.90600</td>
</tr>
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**Model Effect**

<table>
<thead>
<tr>
<th>Medical&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Control&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Social Learning&lt;sup&gt;b&lt;/sup&gt;</th>
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<tbody>
<tr>
<td><strong>Factor 2</strong></td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>Q 1</td>
<td>2.9438</td>
<td>.94494</td>
</tr>
<tr>
<td>Q 3</td>
<td>2.7635</td>
<td>1.10758</td>
</tr>
</tbody>
</table>

**Notes:** Interpretation of these mean differences varies for each question. A copy of the questionnaire is included in Appendix B. Questions were designed with a 5-point Likert scale, except Questions 15 & 16, which used a 7-point scale.

<sup>a</sup>Means were based on N=90 for each disorder.
<sup>b</sup>Means were based on N=50 for each model.
Appendix A
Scripts for Videotapes

ANTI-SOCIAL

T1 - Well, Mr. Johnson, what brings you in to see me?

C1 - Well, . . . over the years I've has some trouble getting along with my bosses, so I figures I would come and see what you could tell me.

T2 - Just what types of problems have you had?

C2 - Well, I happen to be a darn good welder, and I work hard and do a good job. It's just that sometime, when things don't go quite right, I get a little wild . . .

T3 - What exactly do you mean by wild, Mr. Johnson?

C3 - You know, I might smash something or punch somebody. It's kind of like I can't control myself.

T4 - How often do things like this happen?

C4 - I don't know, maybe once every few months.

T5 - How do you feel about these incidents afterwards?

C5 - I think I had a right to be angry, because it's always caused by the bad equipment or incompetent people I have to work with. Buy my employers don't seem to agree with me.

T6 - So you don't think these "wild" episodes are your own fault.

C6 - Well, maybe partially because of my bad temper. For as long as I can remember I've had a quick temper, and when things don't go right I just blow up.
T7 - Do these displays of temper seem to be occurring with more frequency lately?

C7 - Well, I don't think so, but lately people at work have been getting on me a lot about it.

T8 - How long has this problem been going on?

C8 - Oh, it's been with me for a long time. I was having problems a few years ago. I used to get really angry, and I couldn't control my temper. I guess I still can't.

T9 - Have you ever seen a professional before about this problem?

C9 - Yes, ... about two years ago some people where I worked talked me into getting some professional help. They thought I should go because they said I was losing my temper a lot and it was interfering with my work. Things were also kind of strained between my wife and I. We used to argue a lot. Anyway, I saw the guy for about two months.

T10 - And what happened at the time?

C10 - You mean what happened when I met with him?

T11 - Yes, what did you do while you were there with him?

C11 - Well, we talked about a lot of things, you know—my family, the job, my parents. He told me I had an antisocial personality ... Mostly I just found out more about myself, like how I get mad and blow up sometimes and how I need to get myself together and control my temper more. He said I needed to be more responsible and mature.

T12 - Do you think that seeing this person helped you at all?

C12 - Yes. For a while there I had my temper under control. Things were going fine and I was getting along OK with the people at work. Things were better with my wife, too.

T13 - Why did you stop seeing this person?

C13 - I moved here to look for a job.
T14 - Tell me a little about growing up. Did you have any unusual problems when you were younger?

C14 - No, I wouldn't say so. But I did get into trouble because of my temper.

T15 - What kind of trouble?

C15 - Oh,, a few fights ... Well, more than a few, I guess ... Actually, I was in jail twice for fighting. I got a couple of drunk and disorderly charges.

T16 - Were those the only times you've been in trouble with the law?

C16 - Well, I've had some traffic tickets like everyone else ... I got caught stealing some things from a store when I was six or seven, but, you know, I was just a kid then--didn't know any better ... And I got into a little trouble when my ex-wife left. See, I busted up her car pretty bad so she called the police, but she never pressed charges. That was about three months ago.

T17 - Did you have any problems in school?

C17 - Mostly I just got by. I couldn't get interested in what they taught, so I didn't do the work, which got me in trouble with some of the teachers. They said I was an "underachiever." I used to get restless in school, so I stirred things up a lot, you know, like being a smartass with teachers. I was always getting into trouble.

T18 - How do you feel about my asking you all these questions?

C18 - It's OK, I don't mind. I know you have to find out more about me ... What else should I tell you?

T19 - Mr. Johnson, how are you feeling about yourself right now as you're talking to me?

C19 - Well, ... OK, I guess ... I don't hate myself or anything like that. My temper is still bad, and it's been interfering with my work ... I think I have a problem. Sometimes I think it's a serious problem that I have to get over if I want to behave normally, and I think the more I know about myself and my problem the better off I'll be.
T1 - Well, Mr. Johnson, what brings you in to see me?

C1 - . . . Well, . . . lately things have been happening to me that . . . I just don't know why . . . it's hard to explain.

T2 - What kinds of things do you mean, Mr. Johnson?

C2 - . . . Sometimes, . . . I hear things that I know aren't really there . . . no one else hears them.

T3 - What is it that you hear?

C3 - Voices.

T4 - What do these voices say?

C4 - Well . . . I don't know . . . a lot of times I hear my mother telling me that she's disappointed with me.

T5 - Why is she disappointed?

C5 - I don't know.

T6 - Do you hear any other voices?

C6 - Sometimes . . . but I don't recognize them.

T7 - What do they say?

C7 - Well, . . . they ask me why I do certain things . . . or tell me I shouldn't do something.

T8 - How often do you hear these voices, Mr. Johnson?

C8 - Sometimes not for a whole week, and sometimes every day.
T9 - Do these voices seem to be occurring more frequently lately?

C9 - Well, I don't think so . . . but lately people at work have been getting on me a lot about it.

T10 - How do you feel after these voices talk to you?

C10 - Uh . . . usually pretty confused. I don't feel like doing anything . . . it scares me.

T11 - Do you feel confused at any other time?

C11 - No.

T12 - How long has this problem been going on?

C12 - Well, a few years ago I started having the same problem . . . it made me confused. Scared too--I couldn't get rid of the voices sometimes.

T13 - Have you ever seen a professional before about this problem?

C13 - Yes . . . about two years ago, some people where I worked talked me into getting some professional help. They thought I should go because they said I was talking to myself a lot and it was interfering with my work . . . The voices were telling me to be careful and not get hurt.

T14 - What kind of work were you doing?

C14 - I was working at a gas station near the interstate. I used to work nights most of the time, and then sleep during the day.

T15 - Go on . . .

C15 - Anyway, I saw the guy for about two months.

T16 - And what happened at the time?

C16 - You mean what happened when I met with him?
T17 - Yes, what did you do while you were there with him?

C17 - Well, we talked about a lot of things, you know--my family, the job, my parents. He told me I was schizophrenic--paranoid schizophrenic . . . Mostly I just found out more about myself, like how the voices come when I'm under a lot of stress . . . and how I need to get myself together and learn to control my mind.

T18 - Do you think that seeing this person helped you at all?

C18 - Yes . . . for a while there I stopped hearing the voices so much. Things were going better and I was getting along OK with the people at work.

T19 - Why did you stop seeing this person?

C19 - I moved here to look for a job.

T20 - Tell me a little about growing up. Did you have any unusual problems when you were younger?

C20 - Well, . . . I guess I've always been kind of a loner. I never really had a lot of friends when I was younger . . . I was hard to get along with, I guess, because I was pretty shy and kind of preoccupied . . . Sometimes I felt like I was sitting back watching myself. I used to do a lot of that.

T21 - Did you have any problems in school?

C21 - Mostly I just got by. I couldn't get interested in what they taught, so I didn't do the work, which got me in trouble with some of the teachers . . . They said I was an "underachiever".

T22 - Did you hear the voices back then?

C22 - No, that's been mostly in the past two or three years.

T23 - How do you feel about my asking you all these questions?

C23 - It's OK, I guess . . . You're in charge.
T24 - Mr. Johnson, how are you feeling bout yourself right now as you're talking to me?

C24 - Well, ... OK, I guess ... I don't hate myself or anything like that. the voices are back, and it's interfering at work ... I think I have a problem. Sometimes I think it's a serious problem that I have to get over if I want to behave normally, and I think the more I know about myself and my problem the better off I'll be.
Appendix B

Questionnaire

1. To what extent do you think the origin of this problem is a disease process?
   _____ 1. completely
   _____ 2. to a large extent
   _____ 3. to a moderate extent
   _____ 4. to a small extent
   _____ 5. not at all

2. To what extent do you think the origin of this problem is difficulty in getting along with others?
   _____ 1. completely
   _____ 2. to a large extent
   _____ 3. to a moderate extent
   _____ 4. to a small extent
   _____ 5. not at all

3. To what extent do you think the solution of this problems is a medical treatment of the disease process?
   _____ 1. completely
   _____ 2. to a large extent
   _____ 3. to a moderate extent
   _____ 4. to a small extent
   _____ 5. not at all

4. To what extent do you think the solution of this problem is learning how to get along better with others?
   _____ 1. completely
   _____ 2. to a large extent
   _____ 3. to a moderate extent
   _____ 4. to a small extent
   _____ 5. not at all

5. How much have you learned about this person as a result of hearing him on the tape?
   _____ 1. a great deal
   _____ 2. a large amount
   _____ 3. a moderate amount
   _____ 4. a small amount
   _____ 5. nothing at all
6. How serious is this person's problem?
   _____1. extremely serious
   _____2. pretty serious
   _____3. moderately serious
   _____4. not very serious
   _____5. not serious at all

7. How much control does this person have over his problem now?
   _____1. complete control
   _____2. a large amount of control
   _____3. a moderate amount of control
   _____4. a slight amount of control
   _____5. no control

8. To what extent do you believe that this person understands his problem?
   _____1. completely understands
   _____2. mostly understands
   _____3. partially understands
   _____4. slightly understands
   _____5. does not understand at all

9. How likeable did you find this person?
   _____1. very likeable
   _____2. somewhat likeable
   _____3. neither likeable nor unlikeable
   _____4. somewhat unlikeable
   _____5. very unlikeable

10. To what extent would you desire to have this person as a friend?
    _____1. I am certain that I would
    _____2. I am pretty sure that I would
    _____3. I am not sure that I would
    _____4. I am pretty sure that I would not
    _____5. I am certain that I would not

11. To what extent would you desire to have this person as a coworker?
    _____1. I am certain that I would
    _____2. I am pretty sure that I would
    _____3. I am not sure that I would
    _____4. I am pretty sure that I would not
    _____5. I am certain that I would not

12. How likeable do you believe others find this person?
    _____1. very likeable
    _____2. somewhat likeable
    _____3. neither likeable nor unlikeable
    _____4. somewhat unlikeable
    _____5. very unlikeable
13. How predictable do you think this person is in interacting with others?
   1. very predictable
   2. somewhat predictable
   3. neither predictable nor unpredictable
   4. somewhat unpredictable
   5. very unpredictable

14. How likely is it that this person may need help now or in the future?
   1. very likely
   2. somewhat likely
   3. neither likely nor unlikely
   4. somewhat unlikely
   5. very unlikely

15. If this person seeks help, how soon will he show some signs of improvement?
   1. immediately
   2. in a few hours
   3. in a few days
   4. in a few weeks
   5. in a few months
   6. in a few years
   7. never

16. If this person does not seek help, how soon will he show some signs of improvement?
   1. immediately
   2. in a few hours
   3. in a few days
   4. in a few weeks
   5. in a few months
   6. in a few years
   7. never

17. If this person asked you to help with his problem, how likely would you be to do it?
   1. very likely
   2. somewhat likely
   3. neither likely nor unlikely
   4. somewhat unlikely
   5. very unlikely

18. How much help would you be willing to give this person?
   1. a great deal
   2. a large amount
   3. a moderate amount
   4. a small amount
   5. none at all
19. If you had this problem, how likely would you be to seek help?
   _____1. I am certain that I would
   _____2. I am pretty sure that I would
   _____3. I am not sure that I would
   _____4. I am pretty sure that I would not
   _____5. I am certain that I would not