Affective Empathic Responding:

The Effect of Social Distance

Induced Through the Use of Mental Illness Labels

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Running head: EMPATHY AND SOCIAL DISTANCE

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Abstract

Social distance was induced by using mental illness labels to examine its effect on affective empathic responses. Forty-eight college students were video-taped while watching 6 affect-laden vignettes. Two stimulus videotapes were used and were comprised of the same vignettes, but one also gave mental illness labels to induce a degree of social distance in the experimental group. Facial expressions were scored, as were questionnaires measuring empathy, social distance, and attitudes toward the mentally ill. It was hypothesized that empathic facial responsiveness would be lower and social rejection of the vignettes' actors would be higher for the experimental group. No support was found for the manipulation of emotional expressions. Increased social rejection was found, however, its significance was dependent upon an interaction between the 2 groups and participants' ideology regarding mental illness.

Affective Empathic Responding: The Effect of Social Distance Induced Through the Use of Mental Illness Labels

Empathy is an interesting and complicated construct that has been studied extensively. At its most basic level, it is the ability to accurately perceive another's feelings (Levenson & Ruef, 1992). There are two interrelated viewpoints from which it can be examined and explained. Empathy consists of both cognitive and affective components, and there has been much debate over the extent to which each component contributes to empathic attitudes and behaviors. Thus, definitions of empathy vary from one researcher to another.

Researchers who focus on the affective component of empathy describe empathic responses as feeling emotions congruent to what another is feeling. Emotional contagion, or "catching" another's emotion, is seen as the end result of an automatic and often subconscious process that begins with motor mimicry (Hatfield, Cacioppo, & Rapson, 1993). Lipps (1907), as cited in Strayer (1987), also described congruent affect as coming from "...afferent feedback from the body's conscious or unconscious motoric imitations of the other's posture, gesture, and expression" (p. 225). Vicarious, or shared, affect is considered essential to experience empathy (Strayer, 1987). Support for affective empathy can be seen in studies of infants' emotional

behavior (Thompson, 1987). Infants are able to share the emotions of those around them. This emotional contagion comes from simple exposure to the emotion in another person. It is not influenced by an awareness or understanding on the part of the infant of the other's current situation.

Theorists have described cognitive empathy as an act of putting oneself in another's place. It is mediated by a host of variables about which a person consciously thinks. According to Hoffman, (1987) "...the most advanced empathic level involves some distancing - responding to one's mental image of the other rather than only to the other's immediate stimulus value"(p. 53). There is an emphasis on being able to remove oneself from one's own position and take the perspective of another. This ability is referred to as cognitive flexibility (Grattan & Eslinger, 1989).

Support for the existence and influence of both cognitive and affective empathy has been found. However, these components do not exist independently of each other. For example, empathy-mediated helping behavior is seen as the result of an interaction of the two (Archer, Diaz-Loving, Gollwitzer, Davis & Foushee, 1981). Helping behavior results from a two-stage process in which one's empathic emotional response is first increased by being able to take another's perspective. Motivation to help the other is then increased by the experience of the emotional response. Thus, in this case, empathy is seen to result from the vicarious experience of another's emotion tempered by the immediate social situation. Along those same lines, when 10- and 11-year-olds

imagined themselves in a distressful situation, a positive correlation was found between their levels of dispositional affective empathy and their tendency to reflect spontaneously on the thoughts and feelings of distressed peers (Bengtsson & Johnson, 1992).

The literature on empathy also includes both trait-like and state-like conceptualizations. Some researchers emphasize the stable, dispositional aspects of empathic responses. Zahn-Waxler, Robinson, and Emde (1992) found evidence for the heritability of empathy through their studies of twins. Other researchers focus on the situational or transient aspects of empathy. By manipulating personal distress and by examining occurrences of prosocial behavior in experimental settings, the influence of the situation on empathic behaviors can be seen (Eisenberg & Miller, 1987; Eisenberg & Fabes, 1990).

Empathy, however, cannot be looked at solely as trait- or state-mediated responses. A person's empathic behavior can be the product of both inherent, enduring personality characteristics and of learned behaviors from one's surroundings. Being able to determine how much one's empathic responding is shaped by stable personality patterns and by the particular situation at the time adds additional understanding to the motivations behind empathic behaviors.

Given that the formation of empathic behaviors and attitudes is complex and is influenced simultaneously by cognitive, affective, dispositional, and situational factors, researchers do

not share a unitary understanding of empathy. Its definition is open, to a certain extent, to individual interpretation based on thorough consideration of all possible influences. Cognitive, situational influences are abundant and lend themselves to experimental manipulation and measurement. For example, affective empathic responses were decreased by manipulating participants' feelings of anxiety (Olsen & Sullivan, 1996). Also, preexisting mood was found to have a statistically significant, but small, effect on emotional contagion (Hsee, Hatfield, Carlson, & Chemtob, 1990).

Review of the empathy literature reveals that one area of study deserving of investigation is the effect of social distance on empathic responses. The current study focused on how one's social rejection of a person may influence his or her affective empathic facial responses toward that person. To feel socially distant from someone requires the perception of an unattractive quality or difference in the rejected person. Many people are, for example, unaccepting of homosexuals or criminals. A sense of dissimilarity perceived by an individual may, perhaps, decrease the likelihood of that person having a vicarious empathic response. Gurtman, Martin, and Hintzman (1990) reported that empathy was not found in subjects who watched videotapes of people displaying depressed and anxious affect. Participants found the vignettes difficult to relate to because these two particular types of affect were unusual to them and did not fit with their current life situations.

Several researchers have assumed that attitudes toward the mentally ill are associated with feelings of social distance. The stimuli commonly used when measuring feelings of social distance and attitudes toward the mentally ill are written vignettes which describe the behavior of a mentally ill person and/or include a diagnostic label for that person. The vignettes most often used are modeled after those created by Star (1955), cited in Link and Cullen (1983). These vignettes describe the behavior of a mentally ill person. Researchers have used Star's paradigm and then created specific questions to fit their particular study. Nieradzik and Cochrane (1985) wrote concise behavioral descriptions and added occupations and diagnostic labels, such as "schizophrenia". While most vignettes have been written paragraphs, video-taped sequences in which the vignette's character displayed behaviors typical of depression and anxiety have also been used (Lehmann, Joy, Kreisman, & Simmens, 1976).

Conclusions about the effect of labeling differ from one study to the next because there is no standard, universal definition for the concept of a mental illness label. Because there is no general consensus as to what constitutes the most desirable vignettes, content varies depending on the study's hypothesis. For example, Nieradzik and Cochrane (1985) used the labels, "neurotic" and "schizophrenic", and found increased rejection to the written vignettes containing a psychiatric label as compared to vignettes that described behavior without using a label. In another study, a label describing a person as having

spent time in a hospital for psychiatric problems did not produce increased rejection (Lehmann, Joy, Kreisman, & Simmens, 1976). Video-taped vignettes were used in the present study. Diagnostic labels, statements describing psychiatric treatment received, and descriptions of behavior were used together in each vignette so that participants would be likely to experience rejection of the labeled actors.

To measure social acceptance or rejection of mentally ill vignette characters, social distance scales are used to indicate how much personal interaction one is willing to engage in with a mentally ill person. This study based its social distance scale on that developed by Cumming and Cumming (1957), as cited in Brockman and D'Arcy (1978), to measure the social distance felt by participants toward video-taped vignettes. The scale's items are situations that commonly occur in everyday life, but which involve close, personal contact with a mentally ill person. Examples of items include lending money to, working with, or offering membership in a club to a mentally ill person.

In addition to knowing how participants feel toward specific vignette actors, it is also necessary to know their general ideology regarding mental illness. If participants have negative attitudes toward the mentally ill, it is possible that this cognitive bias would magnify social distance and decrease empathy towards vignette actors who are labeled as mentally ill. Taking into account information establishing participants' mental health

ideology, then, would help to clarify and define the true effect of social rejection on affective empathic responses expressed toward vignette actors. Several scales have been developed to measure the attitudes of different populations toward mental illness. The Opinions about Mental Illness Scale (Cohen & Struening, 1959) is a popular tool that was created to measure the attitudes of personnel in psychiatric hospitals. The present study sought the attitudes of college students. Thus, the Community Attitudes Toward the Mentally Ill Scale (Taylor and Dear, 1981), which measures attitudes of the general public, was used.

Attitudes toward mental illness and feelings of social distance are cognitive variables that can be used as factors in an experimental setting to manipulate the empathic attitudes and behaviors of participants. The current study considers whether affective empathic behavior is changeable depending on the situational influence of social distance. When induced through the use of mental illness labels, social distance may decrease affective empathic responses. This type of information could provide insight into how situational components of empathy interact with enduring traits to produce experiences of emotion and emotional expression. In the present study, it was hypothesized that decreased levels of empathy in facial expressions of emotion and increased levels of social rejection as measured by questionnaire responses would be evident in participants in whom a degree of social distance was induced as

compared to those whose feelings of social distance were not experimentally manipulated.

Method

Participants

Undergraduate men and women at a small college volunteered to participate; almost all were freshmen. The initial intention was to use students from Introductory Psychology classes and to have the same ratio of men and women as in those classes. Class rosters were used to recruit student volunteers. Students were contacted by phone and asked to participate in a study on attitudes and communication in which they would watch a ten-minute video and then fill out three questionnaires. Twenty of the first 50 students contacted agreed to volunteer. A new strategy was then developed that added the incentive of receiving a raffle ticket for a $50 prize. The entire freshmen class roster was used as a pool. Approximately 100 more students were called and 48 agreed to participate. Data were collected on a total of 68 participants. The final sample consisted of 48. Data were discarded due to equipment failure for two participants and lack of consent for four. Data on 14 participants, 12 of which were men, were discarded because they were aware of the hidden video camera. A discussion of the use of the hidden camera and a summary of the debriefing of participants is given in Appendix A. Participants were randomly assigned to either the experimental or the control group until one of them, in this case the experimental group, was filled. Participants were recruited until

all cells were filled. The percentages of men and women were kept at that of the Introductory Psychology classes. The final sample was 62% female and 38% male. The experimental and control groups reflected the same ratio of men to women.

Apparatus

The equipment used included a JVC GF-500 video camera, a Sylvania 24-inch color television, and a Panasonic VHS AG-1300 video cassette recorder. Two nearly identical stimulus videotapes were used. Both were comprised of six affect-laden vignettes, each about one minute in length. Each vignette showed a person talking about some aspect of his or her life. Three of the clips conveyed happiness, two conveyed sadness, and one expressed concern. The clips were separated by twenty seconds of blank blue screen. Before each vignette, captions describing the person about to be seen appeared on the screen for the subject to read. The first two sentences referred to his or her occupation and personality. The videotape shown to the experimental group also included one to two more sentences that gave information about any past or present mental illnesses and any psychiatric treatment received. These last statements served as mental illness labels and were used to induce a degree of social distance in the experimental group. Descriptions of the vignettes, captions and labels are shown in Appendix B.

Three questionnaires were used. A Likert-type social distance questionnaire (SDQ) that measured attitudes toward the vignette actors was created from established social distance

scales (Brockman & D'Arcy, 1978; Cumming & Cumming, 1957). The SDQ items are shown in Appendix C. The Interpersonal Reactivity Inventory (IRI) (Davis, 1983) was used as a measure of empathy. Its four subscale scores - Fantasy, Empathic Concern, Personal Distress, and Perspective-Taking - are combined for a total empathy score. General attitudes toward mental illness were measured with the Community Attitudes Toward the Mentally Ill Scale (CAMI) (Taylor & Dear, 1981). The IRI and the CAMI are shown in Appendices D and E, respectively.

Procedure

Participants were told they would be watching a ten-minute video and filling out three questionnaires afterwards. The experimenter described the video as consisting of six, one-minute clips, each separated by 20 seconds of blank blue screen. Participants in the experimental group watched the stimulus videotape which included the mental illness labels. Participants in the control group watched the videotape without the labels. Each participant was run individually and viewed the vignettes alone in a room while being filmed by a hidden video camera. After the video, each participant was given the SDQ to fill out. Once the SDQ was completed, he or she was then given the IRI and the CAMI questionnaires. Participants were told to answer the IRI first, leaving the CAMI as the last questionnaire completed. After debriefing, the experimenter left the room, giving each person the opportunity to sign a second consent form that gave permission to use the videotape data. The participant then left

without seeing the experimenter again so he or she would not feel any pressure to give consent. The average total time for one participant to complete the study was 45 minutes. The participant data form, first consent form, and second consent form are shown in Appendices F, G, and H, respectively.

Results

Facial responses were scored using an established 3-point system (Olsen & Dufault, 1991). Two scorers watched the tapes separately, and each gave a score for each of the six vignettes. These six scores were then added for a total facial response score for each rater. A score of zero was given for no empathic response to a vignette. For the sadness and concern vignettes, one point was given for three or more gaze aversions, increased blinking, a hard swallow, fidgeting, or a turning away of the body. Any of these actions in conjunction with at least one facial expression warranted two points. Three or more facial expressions also constituted a score of two points. The scoring form used is shown in Appendix I. When scoring each tape, the primary rater was blind to which condition each participant belonged. For the experimental group, each of the 24 participants was scored once by the first rater, and ten were randomly chosen to be scored again by the second rater to check for reliability. For the control group, 15 of the 24 participants were scored by the second rater. Interrater reliability was high, r=.9737.

Pooled variance t-tests were used to see if there were any

significant differences between the two groups on their facial response and questionnaire scores. Correlations between facial response scores and questionnaire scores were calculated. A multiple linear regression was performed with SDQ scores as the dependent variable. The independent variables were CAMI scores, Group, and a combined CAMI-by-Group variable.

A significance level of .05 was chosen as a comparison for all of the t-tests. No significant group difference was found for the total IRI score, $t(46)=0.1075$, $p=.9149$, nor for any of its subscales: fantasy, $t(46)=1.9042$, $p=.0631$; empathic concern, $t(46)=0.4295$, $p=.6695$; perspective-taking, $t(46)=-0.9138$, $p=.3656$; personal distress, $t(46)=-1.2917$, $p=.2029$. No significant difference was found for the facial response scores, $t(46)=-0.2681$, $p=.7898$, nor for the SDQ, $t(46)=-1.196$, $p=.2378$. A significant difference was found for the CAMI, $t(46)=2.3199$, $p=.0248$. Group means and standard deviations, t-values, and probability values for each variable are shown in Table 1.

Correlations and probability values for the measures of empathy, attitudes toward mental illness, and social distance are shown in Table 2. No significant correlation was found between the facial responses and social rejection (SDQ), $r=.03$, $p=.86$. Facial responses were also not significantly correlated with self-reported empathy (IRI), $r=.13$, $p=.39$, nor with attitudes toward mental illness (CAMI), $r=-.22$, $p=.14$. Significant correlations were found between self-reported empathy (IRI) and attitudes toward mental illness (CAMI), $r=.39$, $p=.01$, between

self-reported empathy (IRI) and social distance (SDQ), r=.38, p=.01, and between attitudes toward mental illness (CAMI) and social distance (SDQ), r=.39, p=.01. Correlations and probability values between facial responses and social rejection for each individual vignette are shown in Table 3. No significant correlation between the two variables was found for any of the six vignettes.

A multiple regression yielded a significant interaction between CAMI scores and group when predicting social distance (SDQ) scores. Two of the independent variables were significant at the .01 level: CAMI scores, F=19.09, p<.0001; Group, F=11.78, p=.0013. The third independent variable, CAMI-by-Group, was significant at the .05 level, F=5.55, p=.0229. Table 4 shows the variables entered into the multiple regression model.

Discussion

The results of this study do not support the hypothesis that exposure to mental illness labels decreases empathic facial responses. No group difference was found for affective empathic facial responses. In addition, correlations between facial response and social distance, both overall and for each individual vignette, show no relationship between the two variables. Thus, thinking that the six vignettes' characters were mentally ill had no effect on facial expressions of emotion. These results could mean that the attempt to experimentally induce a degree of social distance was unsuccessful. Participants who were exposed to mental illness labels, however, did show

greater social rejection of the vignettes' actors as compared to the control group, even though this difference was not a statistically significant one.

Why were increased feelings of social distance not accompanied by decreased empathic facial expressions? The variable manipulated, social distance, was a self-reported, cognitive variable. The outcome measure was an involuntary facial response that tapped into participants' affective empathy. Given that a clear illustration of the structure of the relationship between affective and cognitive elements of empathy has not been demonstrated by other researchers, perhaps a connection between social distance and facial response does not exist. In this study, facial response was also not significantly correlated with written self-reports of empathy (IRI) or attitudes toward mental illness (CAMI). Facial response and the IRI have been found to be unrelated in the past (Olsen & Dufault, 1991). It is interesting to note that while facial responses did not correlate significantly with any of the questionnaires, all three questionnaires were significantly correlated with each other. Perhaps involuntary measures of affective empathy and self-reports of cognitive variables are of such different natures that they are not related to one another. For example, because people can willfully mask their emotions to a certain extent, the emotions actually experienced internally are not necessarily the ones that are expressed or reported. The fact that the two groups did not differ on affective empathic facial responses, but did

differ, although non-significantly, on social rejection indicates that further study of the relationship between cognitive and affective empathy is needed.

No group difference was expected for empathy as measured by the total IRI score or any of its individual subscales, and one was not found. This indicates that participants' self-reported, trait measure of empathy was not affected by exposure to mental illness labels. One can conclude, then, that the comparison of social distance and facial responsiveness was not confounded by an unwanted group difference in self-reported empathy.

A group difference was found for attitudes toward mental illness as measured by the CAMI where one was not expected. Participants given the mental illness labels reported more positive attitudes to mental illness overall. Since there is no reason to suspect that the two groups would have significantly different attitudes before the study began, it might be concluded that this difference resulted from the experimental manipulation. It seems contradictory that social distance toward specific vignette actors was slightly increased while ideology regarding mental illness overall was softened. Perhaps the vignettes' actors were too attractive, since they did not look or act mentally ill. This may have led the experimental group to view the actors more positively than what would otherwise have been anticipated. This would explain why participants did not show larger amounts of social distance than they did. Having images of the "normal-looking", yet labeled, actors fresh in their minds

as they completed the CAMI may have served to soften their views on mental illness overall.

The results are more complicated with regard to the hypothesis that increased levels of social distance, or rejection, would result from exposure to mental illness labels. As was mentioned earlier, the experimental group did show greater, yet non-significant, social rejection. However, this difference is significant when a multiple regression is used to account for the interaction that occurred between participants' mental illness ideology and group status when predicting social distance felt toward the vignettes. This interaction occurred because of the unexpected group difference on the CAMI. For the lowest CAMI scores, or most negative attitudes toward mental illness, the difference between the groups on social distance felt toward the vignettes is greatest and is significant. As the CAMI scores increase, reflecting more positive attitudes, the difference between the groups on the level of social distance reported decreases and becomes non-significant. Therefore, participants who felt most negatively about mental illness showed more extreme levels of acceptance or rejection of the vignettes. Participants who felt most positively about mental illness showed less extreme levels of acceptance or rejection of the vignettes. It is expected that a more clear-cut group difference for social distance would have resulted if the experimental group's ideology had not been significantly different from that of the control group.

It would be interesting to run this study again and to have the subjects complete the CAMI before watching the vignettes. It is expected that no group difference would be found in this case. Completion of the CAMI as the first measure may also prime participants, resulting in greater access to mental illness ideology. With attitudes toward mental illness unaffected by exposure to the vignettes, it is more likely that increased social distance and decreased empathic facial responses expressed toward the vignettes would be found. It would also be of value to have participants fill out self-reports of the emotions experienced while watching the vignettes. This would provide another measure of empathy and emotional congruence since the experience of emotion and the expression of emotion are not always in conjunction with one another.

The influence of cognitive variables such as social distance on facial response still remains questionable. Cognition and affect are definitely related in the study of empathy, but how they interact is not clearly known. Perhaps this study's hypothesis was wrong, and no relationship exists between social distance and facial response. Other cognitive variables may or may not have a bearing on affective empathy. Studies employing variables such as attitudes toward criminality or homosexuality could help to clarify the issue.

It is also possible that social distance does influence affective empathy, but that the methods used in this study did not reflect an accurate measurement of empathic responses and

attitudes. The use of mental illness labels in past studies was thoroughly researched. Based on past findings, the labels used in the present study were specifically worded so as to ensure the likelihood of induced feelings of social distance in the experimental group. The effectiveness of the video-taped vignettes themselves, however, has not been established. Because the objective was to measure participants' vicarious emotional responses to the actors they watched, the ideal situation, presumedly, would have been for the vignettes to contain only pure affect. Yet, imagine how participants would react to a clip of a person smiling continuously for one minute. The clips must include some type of dialogue together with conveying the same affect throughout the vignette. Any type of dialogue, though, adds a cognitive element that influences vicarious emotional responses. So, it is possible that participants' empathic facial responses resulted from the combination of the affect conveyed in the clip, the manipulation of social distance, and individual opinions formed about the actors while watching them and hearing them speak.

Although empathic facial responses were not affected in this study, it appears that exposure to mental illness labels did increase self-reported social distance toward a specific, labeled person, especially among those participants who had more negative attitudes toward mental illness. An unexpected effect in this study was the softening of the experimental group's mental illness ideology, resulting in more positive attitudes regarding

the mentally ill overall. There are many unresolved questions in the attempt to examine and understand empathy. These questions include defining empathy itself, establishing a clear explanation of how its elements interact to produce empathic attitudes and behaviors, investigating the effect of various factors on empathy, and measuring empathy and emotional responses accurately.

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Appendix A

Use of the Hidden Video-Camera and Debriefing

To get a true sense of one's empathy, facial responses must be natural reactions. When people know they are being watched, they react differently than when they think they are alone. Sometimes, the changed reaction is conscious, but it can also be involuntary or subconscious. I wanted to determine exactly how suspicious each person was in order to decide if he or she should be included in the final sample. My debriefing procedure was very thorough so that awareness of the camera did not become a confounding variable in the comparison of facial response and social distance. I explained the purpose of the study, my hypothesis, the importance of natural reactions, and why the camera was hidden. I asked specific questions about their awareness. Participants were not included if they saw the camera, thought there was a camera but did not know where it was, or thought they were being watched in any way. For example, one participant, whose data were discarded, thought someone was in the room with him. An unusual and unexpected number of participants were aware of the camera. The higher number of men resulted because they expected and looked for a deception more often than did women. Suspicion often came from the knowledge that this was a psychology experiment and that it was common to video-tape participants.

Appendix B

Vignette Captions and Mental Illness Labels

Vignette 1: (happiness) woman talks about her grandchildren

This grandmother enjoys babysitting for two of her grandchildren every day while their parents are at work. They play games, go for walks, and go shopping. *Last month she started to notice disturbances in her mood. She is either very happy or very sad. She told her counselor that she is afraid she is going crazy.*

Vignette 2: (happiness) man talks about his love of sports

This man has been the athletic director who runs the intramural programs for a large university. He enjoys participating in a variety of sports. *He experiences episodes of mania and takes Lithium to control them. He sees a psychologist every other week.*

Vignette 3: (sadness) man talks about death of a student

This man was a teacher for 15 years and is now a respected high school principal. He is devoted to his students and is well-liked by them. *He began to feel very sad and hopeless over the summer and tried to commit suicide. He was diagnosed with depression and now sees a psychiatrist.*

Vignette 4: (happiness) woman talks about getting an acting part

This woman is a college student majoring in theater. She loves performing in plays and wants to become an actress. *She sometimes becomes overly emotional when expressing her feelings. She has a histrionic personality disorder and receives treatment at the university counseling center.*

Vignette 5: (concern) man talks about being transferred to another city for his job.

This man graduated from college two years ago and got a job as a computer programmer. He has been married a year and just finished building a home. *He was experiencing hallucinations and felt others were out to get him. He takes the medicine Thorazine and is currently free of psychosis.*

Vignette 6: (sadness) woman talks about her miscarriage

This homemaker and devoted mother of three volunteers her time as an aide at her child's school and as a story-teller at the local library. She recently experienced a miscarriage. *She worries a lot and becomes very anxious, sometimes leading to a panic attack. She was just discharged after three weeks on the psychiatric floor of the local hospital.*

SDQ Scale

Remembering the video clips you just watched, please indicate the extent to which you agree or disagree with the statements below. Keep in mind the specific clip indicated in each question.

-2	-1	0	1	2
strongly disagree	disagree	neutral	agree	strongly agree

1. Segment with the grandmother who babysits her grandchildren.

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

2. Segment with the male athletic director who loves sports.

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

3. Segment with the male teacher/high school principal:

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

-2	-1	0	1	2
strongly disagree	disagree	neutral	agree	strongly agree

4. Segment with the female college student who wants to be an actress.

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

5. Segment with the male computer programmer whose employer is transferring him.

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

6. Segment with the mother who experienced a miscarriage.

a. I would not welcome this person to take part in my activities, clubs, or organizations.
-2 -1 0 1 2

b. I would be willing to rent an apartment next door to this person's apartment.
-2 -1 0 1 2

c. If we were co-workers, I would not want to share an office with this person.
-2 -1 0 1 2

d. I would be willing to work together on a school project with this person.
-2 -1 0 1 2

(Based on Cumming & Cumming, 1957, Brockman & D'Arcy, 1978)

Appendix D

IRI Scale

I.R.I. Subj. I.D.#_____

		0	1	2	3	4
		Does Not Describe Me Very Well				Describes Me Very Well
1.	I daydream and fantasize, with some regularity, about things that might happen to me.	0	1	2	3	4
2.	I often have tender, concerned feelings for people less fortunate than me.	0	1	2	3	4
3.	I sometimes find it difficult to see things from the "other guy's" point of view.	0	1	2	3	4
4.	Sometimes I don't feel very sorry for other people when they are having problems.	0	1	2	3	4
5.	I really get involved with the feelings of the characters in a novel.	0	1	2	3	4
6.	In emergency situations, I feel apprehensive and ill-at-ease.	0	1	2	3	4
7.	I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	0	1	2	3	4
8.	I try to look at everybody's side of a disagreement before I make a decision	0	1	2	3	4
9.	When I see someone being taken advantage of, I feel kind of protective towards them.	0	1	2	3	4
10.	I sometimes feel helpless when I am in the middle of a very emotional situation.	0	1	2	3	4
11.	I sometimes try to understand my friends better by imagining how things look from their perspective.	0	1	2	3	4
12.	Becoming extremely involved in a good book or movie is somewhat rare for me.	0	1	2	3	4
13.	When I see someone get hurt, I tend to remain calm.	0	1	2	3	4
14.	Other people's misfortunes do not usually disturb me a great deal.	0	1	2	3	4
15.	If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	0	1	2	3	4

-2-

16.	After seeing a play or movie, I have felt as though I were one of the characters.	0	1	2	3	4
17.	Being in a tense emotional situation scares me.	0	1	2	3	4
18.	When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	0	1	2	3	4
19.	I am usually pretty effective in dealing with emergencies.	0	1	2	3	4
20.	I am often quite touched by things that I see happen.	0	1	2	3	4
21.	I believe that there are two sides to every question and try to look at them both	0	1	2	3	4
22.	I would describe myself as a pretty soft-hearted person.	0	1	2	3	4
23.	When I watch a good movie, I can easily put myself in the place of a leading character.	0	1	2	3	4
24.	I tend to lose control during emergencies.	0	1	2	3	4
25.	When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	0	1	2	3	4
26.	When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	0	1	2	3	4
27.	When I see someone who badly needs help in an emergency, I go to pieces.	0	1	2	3	4
28.	Before criticizing somebody, I try to imagine how I would feel if I were in their place.	0	1	2	3	4

(Davis, 1983)

CAMI Scale

CAMI

Please read each of the following statements and circle the number which indicates to what extent you agree or disagree with each.

-2	-1	0	1	2
strongly disagree	disagree	neutral	agree	strongly agree

1. One of the main causes of mental illness is a lack of self-discipline and will power.
   -2 -1 0 1 2

2. The mentally ill have for too long been the subject of ridicule.
   -2 -1 0 1 2

3. The mentally ill should not be given any responsibility.
   -2 -1 0 1 2

4. Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community.
   -2 -1 0 1 2

5. The best way to handle the mentally ill is to keep them behind locked doors.
   -2 -1 0 1 2

6. More tax money should be spent on the care and treatment of the mentally ill.
   -2 -1 0 1 2

7. The mentally ill should be isolated from the rest of the community.
   -2 -1 0 1 2

8. The best therapy for many mental patients is to be part of a normal community.
   -2 -1 0 1 2

9. There is something about the mentally ill that makes it easy to tell them from normal people.
   -2 -1 0 1 2

10. We need to adopt a far more tolerant attitude toward the mentally ill in our society.
    -2 -1 0 1 2

11. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.
    -2 -1 0 1 2

12. As far as possible, mental health services should be provided through community based facilities.
    -2 -1 0 1 2

13. As soon as a person shows signs of mental disturbance, he should be hospitalized.
    -2 -1 0 1 2

-2	-1	0	1	2
strongly disagree	disagree	neutral	agree	strongly agree

14. Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for.

-2 -1 0 1 2

15. I would not want to live next door to someone who has been mentally ill.

-2 -1 0 1 2

16. Locating mental health services in residential neighborhoods does not endanger local residents.

-2 -1 0 1 2

17. Mental patients need the same kind of control and discipline as a young child.

-2 -1 0 1 2

18. We have a responsibility to provide the best possible care for the mentally ill..

-2 -1 0 1 2

19. Anyone with a history of mental problems should be excluded from taking public office.

-2 -1 0 1 2

20. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services.

-2 -1 0 1 2

21. Mental illness is an illness like any other.

-2 -1 0 1 2

22. The mentally ill don't deserve our sympathy.

-2 -1 0 1 2

23. The mentally ill should not be denied their individual rights.

-2 -1 0 1 2

24. Mental health facilities should be kept out of residential neighborhoods.

-2 -1 0 1 2

25. The mentally ill should not be treated as outcasts of society.

-2 -1 0 1 2

26. The mentally ill are a burden on society.

-2 -1 0 1 2

27. Mental patients should be encouraged to assume the responsibilities of normal life.

-2 -1 0 1 2

-2	-1	0	1	2
strongly disagree	disagree	neutral	agree	strongly agree

28. Local residents have good reason to resist the location of mental health services in their neighborhood.
-2 -1 0 1 2

29. Less emphasis should be placed on protecting the public from the mentally ill.
-2 -1 0 1 2

30. Increased spending on mental health services is a waste of tax dollars.
-2 -1 0 1 2

31. No one has the right to exclude the mentally ill from their neighborhood.
-2 -1 0 1 2

32. Having mental patients living within residential neighborhoods might be good therapy but the risks to residents are too great.
-2 -1 0 1 2

33. Mental hospitals are an outdated means of treating the mentally ill.
-2 -1 0 1 2

34. There are sufficient existing services for the mentally ill.
-2 -1 0 1 2

35. The mentally ill are far less of a danger than most people suppose.
-2 -1 0 1 2

36. It is frightening to think of people with mental problems living in residential neighborhoods.
-2 -1 0 1 2

37. Virtually anyone can become mentally ill.
-2 -1 0 1 2

38. It is best to avoid anyone who has mental problems.
-2 -1 0 1 2

39. Most women who were once patients in a mental hospital can be trusted as babysitters.
-2 -1 0 1 2

40. Locating mental health facilities in a residential area downgrades the neighborhood.
-2 -1 0 1 2

(TAYLOR & DEAR 1981)

Participant Data Form

Participant Data Form - Spring, 1996 - Olsen - Lycoming College Psychology Dept.

Name:_____ ID#_____

Sex: Male Female

Age: _____ Phone #:_____ Campus Box #:_____

Year in college: FR SOPH JR SR

Consent 1 Yes No Date:_____

Consent 2 Yes No Date:_____

QAV Yes No

IRI Yes No

SDS Yes No

CAMI Yes No

Goodv Yes No

Any friends or relatives with a mental illness? Yes No

Any volunteer or paid work with the mentally ill? Yes No

Aware of vc? Yes No

Consent Form #1

LYCOMING COLLEGE
WILLIAMSPORT, PA. 17701

Informed Consent Form:
Research Directed by Kurt H. Olsen, Ph.D.

I understand that I am participating in a research program. I will provide information to be used only for scientific purposes. Any data I provide will be kept in the confidence of the members of the research team. I am under no obligation to participate in this research and I may quit the procedure at any time without jeopardy or penalty. By signing below, I give my permission to the researchers to use the information that I provide for scientific purposes.

_____ _____

Signature Date

Consent Form #2

LYCOMING COLLEGE
WILLIAMSPORT, PA. 17701

Consent Form Number Two:

Permission to use video-tape data

I understand that I was video-taped during part of today's experiment. I realize that the surreptitious nature of the taping was necessary for the purposes of the experiment. I understand that the video-taped data will be handled and stored with confidentiality. The tape will be used only for scientific research purposes related to this project. I give my permission for the video-taped images of myself to be used for this research project.

_____ _____

Signature Date

Facial Response Scoring Form

Facial Expression Coding Form

SUBJECT #___ _____

SCORER _____ _____

Vignette # Score: 0=NO EMPATHY
1=SMALL AMOUNT
2=GREAT AMOUNT

1_____
2_____
3_____
4_____
5_____
6_____
7_____
8_____
9_____

TOTAL SCORE_____

NOTES:

1

2

3

4

5

6

7

8

9

Table 1

Group Means and Standard Deviations, t-Values, and p-Values for Each Measure

Measure	Control M(SD)	Experimental M(SD)	t(46)	p-value
IRI	67.92(8.73)	68.21(10.03)	.11	.91
IRI Subscales:				
Fantasy	16.83(5.19)	19.71(5.26)	1.90	.06
Empathic Concern	21.00(4.47)	21.50(3.54)	.43	.67
Perspective-Taking	19.00(5.09)	17.67(5.01)	-0.91	.37
Personal Distress	11.08(4.42)	9.33(4.95)	-1.29	.20
Faces	5.46(2.95)	5.21(3.49)	-0.27	.79
SDQ	25.54(12.67)	20.71(15.21)	-1.20	.24
CAMI	22.71(21.98)	37.71(22.81)	2.32	.02*

Significance at $p<.05$ indicated by *

IRI - higher scores indicate higher levels of empathy

Faces - higher scores indicate higher levels of empathy

SDQ - higher scores indicate less social distance felt

CAMI - higher scores indicate more positive attitude towards the mentally ill

Table 2

Correlations and P-values for Empathy, Attitude Toward Mental Illness and Social Distance Variables (Pearson's r / P-value)

	Faces	IRITot	Fan	EC	PT	PD	CAMI	SDQ
Faces	--	--	--	--	--	--	--	--
IRI-Total	.13 .39	--	--	--	--	--	--	--
Fantasy	.15 .29	.53 .00**	--	--	--	--	--	--
Empathic Concern	-.03 .84	.60 .00**	.12 .41	--	--	--	--	--
Perspective-Taking	-.04 .81	.53 .00**	-.03 .83	.23 .12	--	--	--	--
Personal Distress	.14 .36	.29 .04*	-.17 .26	-.04 .78	-.19 .21	--	--	--
CAMI-Total	-.22 .14	.39 .01*	.32 .03*	.38 .01*	.19 .19	-.12 .40	--	--
SDQ-Total	.03 .86	.38 .01*	.41 .00**	.25 .09	.11 .47	-.05 .76	.39 .01*	--

Significance at p<.05 indicated by *
Significance at p<.01 indicated by **

Table 3

Correlations and P-values for Facial Responses and Social Distance (SDQ) for each Vignette

	Pearson's r	P-value
Vignette 1	-.06	.70
Vignette 2	-.09	.53
Vignette 3	.05	.72
Vignette 4	.21	.16
Vignette 5	-.09	.55
Vignette 6	.03	.82

Table 4

Multiple Linear Regression: Equation and Variables in the Model Predicting Social Distance (SDQ)

SDQ = 2.8265 + 0.4742 * CamiTotal + 20.3166 * Group - 0.3686 * CamiXGroup

Order Entered	Variable	Coefficient	F_to_Remove	p-value
1	CamiTotal	0.47	19.09	<.0001
2	Group	20.32	11.78	0.0013
3	CamiXGroup	-0.37	5.55	0.0229