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THE EFFECT OF SEX AND ATTRACTIVENESS ON MENTAL ILLNESS PRE-LABELING

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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The Ohio State University 1977

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INTRODUCTION

Recent work in the sociology of deviance has focused on understanding the importance of societal reactions in the creation of deviance and deviant identities. According to Becker (1963),

social groups create deviance by making the rules whose infraction constitutes deviance, and by applying those rules to particular people and labeling them as outsiders. (p. 9)

A direct consequence of such labeling is the creation of deviant identities. Schur (1971) suggests that the assignment of a deviant status to an individual prepares the individual as well as others in society to interpret both past and future acts as reflecting the person's deviancy. In the process of reassigning meaning to past events, the labeled individual is seen as always having been a person of the sort indicated by that label.

Traditional views of deviancy suggest that whether or not a person is a deviant is largely determined by whether she or he violates or obeys social rules. However, more recently it has been proposed that the labeling of a specific individual's actions as deviant is

increasingly contingent upon circumstances of situation, place, social and personal biographies, and bureaucratically organized agencies of social control (Kitsuse, 1962, p. 256).

That is, rules may appertain to certain persons and not to others or only to certain situations.
Labeling theorists focus on the process by which rule breaking—or assumed rule breaking—results in labeling. Erikson (1964) speaks of a community screening device through which not only a suspected deviator's actions but also such factors as the individual's demeanor, social class, and overt remorse are sifted in the process of making a decision about the behavior. Erikson suggests that in the study of deviance, this community screen "may be a more relevant subject for... research than the actual behavior which is filtered through it" (p. 12). Schur (1971) also mentions that the "salience of a particular variable in determining...the susceptibility to labeling varies with the type of deviation being considered" (p. 151) and that "there is a reciprocal reaction between the operation of...'predictor variables' and societal reaction processes" (p. 158). According to deviance theorists, then, deviance is a created, negotiated reality rather than an absolute one. It is one possible outcome of an interaction between a suspected deviator and a social agent empowered to label others as deviant, and it is dependent on a number of social variables. How the interaction between these social (and particularly actor) variables and the deviant act affects the negotiation of a particular label, however, is not addressed by either Schur or Erikson.

The effect of actor variables on the labeling of behavior as deviant is also not addressed by Scheff (1966) in his development of the idea of mental illness as residual deviance. Scheff defines behaviors which are likely to be seen as indications of mental illness as those which violate such basic social norms as to be 'unthinkable' and 'violations of decency and reality.' That is, residual deviant
behaviors, those which cannot be subsumed under another label (e.g.,
criminal, sinfulness), tend to be categorized as mental illness. While
this formulation is useful in understanding how some behaviors may be
labeled as 'crazy,' Scheff leaves unanswered questions concerning the
social variables which increase or decrease an individual's likelihood
of having her or his behavior seen as a violation of decency and
reality.

The theoretical formulations of ethnomethodology offers a means
for understanding the process by which individuals are labeled as
mentally ill. According to the ethnomethodologists, underlying all
social interactions are basic, stable, and unquestioned assumptions
about how people are and how they ought to be in the world, and these
taken-for-granted assumptions will affect which social rules or norms
are seen as relevant for understanding the behavior of specific persons
(Cicourel, 1974; Garfinkel, 1967). An understanding of what these
assumptions or expectations are is necessary if one is to understand
how individuals construe interactions and assign meanings to them.
Before one can know that an act is deviant (i.e., violates some social
norm) and know the type of deviant act it is (i.e., which norm it
violates), one must first know that a specific rule or norm is appli-
cable in that situation.

Both Garfinkel and Cicourel differentiate this common body of
assumptions from more substantive knowledge such as that of norms,
social customs, and the like. Garfinkel (1967) defines these assump-
tions as "social methods (operations) for accomplishing the members'
recognition that something was said-according-to-a-rule" as opposed
to "the demonstrable matching of substantive matters" (p. 30). Cicourel (1974) states that these assumptions—which he calls interpretive procedures—allow individuals to assign meaning to a situation so that they can choose from among normal forms of behavior the one which is appropriate for that situation. Specifically, Cicourel indicates that during routine interactions between individuals, much is left unsaid so that interactive competence requires that one go beyond the data available in a situation and fill-in-the-blanks from the common body of assumptive knowledge.

The meaning of an interaction, then, is dependent on the assumptions one brings to that interaction. At the same time, however, Cicourel (1974) notes that participants in an interaction may not be able to explain their ability to behave competently or to state the rules that they use for doing so. That is, most individuals are not conscious of—can not verbalize nor recognize—the assumptions which are basic to their social interactions.

It is suggested here that a prerequisite to understanding how individuals are labeled as deviant is an understanding of the common, social assumptions about how people are and ought to be in the world. It is also suggested that certain labels are seen as more appropriate than others for categorizing the deviant behaviors of specific types of people. That is, there are some assumptions about social reality which are determinate of the categories of meaning which will be used in understanding a given individual's actions. As a result, certain individuals, as a function of group memberships, are more likely than others to have their deviant behaviors labeled in some ways rather
than others. This notion is herein called pre-labeling to signify that certain individuals have an a priori higher probability than others of being assigned certain labels irrespective of their deviant behaviors.  

While labeling theory proposes that individuals acquire deviant identities—are seen as people of a specific sort—after their acts are labeled as deviant, pre-labeling suggests that individuals may be seen as 'that sort' prior to being identified as having engaged in an act that might be construed as deviant. Thus, an innocent bystander to a deviant act may be viewed as more or less innocent depending on the type of person she or he already is. A slum teenager, for instance, who witnesses a ghetto 'rumble' may be more suspect than an older person or a middle-class teenager simply because he or she is assumed to be a 'person of that sort.'

It is suggested that the taken-for-granted assumptions about how people are in the world will affect which social rules or norms are seen as applicable in any given case. The assumptive knowledge that a suspected deviator and a social agent bring to an interaction will affect the negotiation of meaning—whether deviant or non-deviant—of the deviator's behavior. This knowledge will also affect what categories of deviance the behavior fits and thus what labels will be applied. The meaning finally negotiated, then, will depend on the sort of person the deviator is seen to be—by both him or herself and by the social agent—and on the sorts of behaviors which are expected

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1This is not meant to imply that the behavior, the labeler, or any one of a large number of other factors do not affect the labeling process as well.
from that type of person.

Although pre-labeling can occur on a number of dimensions (e.g., intelligence), it is the purpose of this study to investigate the mental illness pre-labeling of individuals specifically as a function of their sex and attractiveness. Ideas about what constitutes mental illness and who is most likely to be mentally ill may be part of the 'unnoticed background expectancies' (Garfinkel, 1967) people bring to an interaction so as to assign meaning to events. Just as children learn the imagery of mental disorder at an early age (Scheff, 1966), they may also learn the procedures surrounding when and toward whom to invoke a mental illness explanation of behavior.

The term pre-labeling is very consciously used for a process which others might label stereotyping. Pre-labeling refers to the implicit, unquestioned and unverbalized ideas that individuals use in constructing their realities. Like stereotyping, pre-labeling has as its major focus the ways in which people go beyond the information given by a specific stimulus. However, pre-labeling differs from stereotyping in two very important ways. First of all, the author prefers to use stereotyping to refer to attitudes and beliefs of which we are relatively aware even as we act on them. Pre-labeling, on the other hand, refers here to assumptions which are so basic that we are unaware of them and the way they affect our behavior. Secondly, definitions of stereotyping assume the existence of an ultimate truth of which the stereotype is considered a distortion and thus imply that some people

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2See Appendix A for a further development of these differences.
are able to reason correctly, to know the world as it actually exists, while others stereotype. The basic assumption of pre-labeling, on the other hand, is that all realities are humanly produced. In investigating pre-labeling, then, the emphasis is not on the validity of the categories people use in understanding their world but on the categories themselves and how they affect behavior, thereby further defining reality.

It is proposed here that certain types of people are pre-labeled as mentally ill. That is, as a function of specific identifying characteristics, certain people are more likely than others to have their behavior seen as indicative of mental illness (assuming there is a felt social need to apply some form of deviant label). Specifically, it is hypothesized that women, as compared with men, and unattractive individuals, as compared with attractive persons, have an a priori greater probability of being labeled mentally ill.

Literature Review

Previous research investigating sex differences in the attribution of mental illness has demonstrated that the labeling of a person as mentally ill depends in large part on whether the person's deviant behavior is seen as sex-appropriate or sex-inappropriate (Eisenthal, 1971; Coie, Pennington, Buckley, 1974; Larson, 1970). In these studies, descriptions of behavior were prepared and attributed to a man or a woman. Subjects were then asked to indicate how mentally ill the stimulus person was. The results indicate that individuals are labeled mentally ill to the extent that they engage in sex-inappropriate
behavior. Larson, for instance, found that shy, withdrawn behavior was much more likely to be seen as indicative of severe mental illness when attributed to a male than when attributed to a female. In contrast, erotomania—compulsively promiscuous behavior—was viewed as more an indication of mental illness for women than men.

The evidence for the existence of a generalized tendency across situations to perceive one sex as mentally ill more than the other is conflicting. Coie et al. (1974) and Herson (1974) report that they found no such tendency while Eisenthal (1971) found that more pathology was attributed to males. However, because of the confounding of sex with the sex-appropriateness of the behavior, these three studies do not provide clear information about the existence or lack of a general tendency to pre-label one sex or the other as mentally ill.

Although no studies have directly addressed the question raised by the pre-labeling model, there is indirect support for the idea that women are pre-labeled as mentally ill compared with men. Specifically, the research to be discussed here indicates that (1) healthy males and healthy females are characterized differently by both mental health professionals and laypersons and that feminine characteristics, as compared with masculine, are seen as less mentally healthy, (2) women may see themselves as less emotionally stable than men and thus may present themselves in ways that appear to be 'disturbed,' (3) mental health professionals respond differently to women than to men in that they elicit more (and possibly different) responses from them, and (4) to the extent that illness behavior is tolerated more in women than in men, women are encouraged, relative to men, to conceptualize their
problems in illness terms. Thus, it will be argued that simple categorical identification of a person—in this case as female—seems to lead to that person being pre-labeled as mentally ill.

The existence of consensual beliefs about the differing characteristics of women and men has been widely documented (Anastasi & Foley, 1949; Fernberger, 1948; Komarovsky, 1950; McKee & Sherriffs, 1957; Seward, 1946; Seward & Larson, 1968; Wylie, 1961). In a study to determine whether clinical judgments about the traits characterizing healthy, mature, socially competent individuals also differed as a function of the sex of the person being judged, Broverman, Broverman, Clarkson, Rosenkrantz, and Vogel (1970) asked mental health professionals to characterize the healthy woman and man. They reported that healthy women, in contrast to men, were seen as:

more submissive, less independent, less adventurous, more easily influenced, less aggressive, less competitive, more excitable in minor crises, having their feelings more easily hurt, being more emotional, more conceited about their appearance, less objective, and disliking math and science. (pp. 4-5)

Others have also reported that differing mental health standards for males and females are held by professionals (Neulinger, Schillinger, Shein, Welkowitz, 1970) and laypersons (Nowacki & Poe, 1973).

The existence of differences between how healthy women and healthy men are described does not necessarily imply that women are viewed as less mentally healthy than men. However, two different groups of studies indicate that in addition to being seen as different from healthy men, healthy women also may be seen as less healthy by adult standards. One of these groups of studies demonstrated that masculine characteristics are more highly valued—considered more socially
desirable—in this society than are feminine characteristics (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Fernberger, 1948; McKee & Sherriffs, 1957, 1959; Rosenkrantz et al., 1968; Sherriffs & Jarrett, 1953; White, 1950). The other group of studies found a positive correlation between the desirability of behaviors and the ratings of those behaviors in mental health related terms by both mental health professionals and laypersons (Broverman et al., 1970; Cowen, 1961; Kogan, Quinn, Ax, & Ripley, 1957; Wiener, Blumberg, Segman, & Cooper, 1959). In the eyes of both professionals and laypersons, then, the association of mental health with masculine-identified behaviors and characteristics seems to be much stronger than with feminine-identified behaviors and characteristics.

While these findings lend support to the idea that women may be pre-labeled as mentally ill, a study of attitudes toward mental patients found that both patients and non-patients saw the mental patient as 'neither masculine nor feminine' (Crumpton, Weinstein, Acker, & Annis, 1967). At the same time, though, the mental patient was seen to be excitable (by 82% of the subjects), foolish (76%), passive (59%), and weak (56%). This set of characteristics closely resembles those attributed to women, specifically that in comparison with men, women are seen as emotional, very excitable in a minor crisis, foolish, confused, submissive, very passive, weak, and neurotic (Broverman et al., 1972; Rosenkrantz et al., 1968; Sherriffs & McKee, 1957).
It may be that women as a group can be accurately characterized as more likely than men to possess those traits which are also attributed to mentally ill persons. It seems more likely, however, that an enormous overlap exists between the sexes with respect to traits such as logical ability, independence, emotional stability, etc. That is, there are probably many women who possess these traits to a greater extent than do many men. Rather than accurately describing women, then, these differences may reflect a basic assumption made in this society about the greater appropriateness of mental illness as a label for women's than men's behavior. Thus, to the extent that the mental illness label is more appropriate for women than men, the traits which accompany that label are also more appropriate.

If pre-labeling is a culture-wide phenomenon as suggested here, then all members of this society, including women themselves, would be expected to pre-label women as mentally ill. Data to suggest that women may organize their actions in ways that encourage using mental illness as a way of understanding their problem behavior is presented by Goldberg (1974) and Abramowitz and Abramowitz (1973). Goldberg reported that women gave significantly more pathological responses to the "Most girls..." stem on the Rotter Incomplete Sentences Blank (Rotter & Rafferty, 1950) than they did to the "Boys..." stem. The women's mean response to the female stem was also significantly greater (had a higher pathology rating) than the men's mean response to either the female or the male stem. Abramowitz and Abramowitz (1973) replicated these findings and suggested that women seem to have "internalized their cultural stereotype as more emotionally
unstable than men" (p. 503). It is not clear why the men in this study did not exhibit the same pre-labeling.

In addition to women presenting themselves as disturbed, the literature suggests that the amount and type of data on which diagnostic impressions are formed may be as much a function of the psychiatric tester's mental set as of the patient's. Hersen (1970) found that male examiners elicited more Rorschach responses from female patients than from male patients. Female examiners, on the other hand, elicited similar numbers of responses from their female and male patients. Similarly, in a study by Masling and Harris (1966), male, but not female, examiners gave more TAT cards to female than to male patients. In addition, Siskind (1973) reported that in a psychiatric outpatient clinic, both male interns and more experienced male clinicians administered more TAT cards to women clients than to men. At least with male therapists, then, the responses women give to psychological tests may reflect the examiners' expectations as well as the women's. While this differential response does not in itself indicate that mental health professionals are more likely to conceptualize women's behavior in mental illness terms, it does indicate that sex is an important variable in making mental health judgments.

Women who present themselves for psychiatric treatment may differ in some fashion from their male counterparts and thus merit the differential response the research indicates they receive. However, two studies (Hersen, 1970; Masling & Harris, 1966) found that female examiners did not respond differently to female and male clients. It may be that women patients, though not men, react differently to
female and male therapists. An equally tenable conclusion, however, is that male mental health professionals hold different basic assumptions about the relationship between an individual's sex and psychological adjustment and act on this assumption in the therapeutic situation. Research on illness behavior and the sick role offers a means for understanding a greater tendency for women than men to report themselves as psychologically disturbed (Mechanic, 1962; Mechanic & Volkhart, 1961). Illness behavior "refers to the ways in which given symptoms may be differentially perceived, evaluated and acted upon (or not acted upon) by different kinds of people" (Mechanic, 1962, p. 189). Mechanic contends that cultural and social pressures interact with physical or psychological symptoms in determining illness behavior and adoption of the sick role. In a study of young children's illness behavior, Mechanic (1964) found that age and sex were the best predictors of children's reports of "fear of getting hurt" and "attention to pain" with the boys and older children being more stoical than the girls and younger children.

In view of the expectation that men are to be strong and self-reliant in comparison with women, it is not surprising to note that they are less willing than women to display personal weakness. The importance of a display of greater strength and health by men than women seems to be endorsed by both sexes. Phillips (1964) found that men tend to be rejected more than are women for displaying the same illness behaviors and seeking the same help source. This finding is consistent with that of Bennett and Cohen (1959) that men, in contrast to women, feel a greater need not to be sick and also with the results
reported by Fischer and Turner (1970) that women are more likely to endorse help-seeking behavior for themselves than are men.

Being sick, then, seems to be much more acceptable feminine than masculine behavior, and to the extent that illness behavior is tolerated more in women than men, women are encouraged, relative to men, to conceptualize their problems in illness terms.

In summary, a variety of literature lends credence to the idea that women are more likely than men to have their deviant behavior conceptualized in mental illness terms. The evidence specifically suggests that (1) feminine characteristics, as compared with masculine, are seen as less mentally healthy, (2) women may present themselves in ways that appear to be 'disturbed,' (3) mental health professionals respond differently to women than to men in that they elicit more (and possibly different) responses from them, and (4) to the extent that illness behavior is tolerated more in women than in men, women are encouraged, relative to men, to conceptualize their problems in illness terms. Thus, simple categorical identification of a person—in this case female—may lead to that person being pre-labeled as mentally ill.

Like sex, attractiveness is also proposed as a basis on which mental illness pre-labeling occurs. The attribution of positive or socially desirable characteristics to more attractive as opposed to less attractive individuals is well documented (Clifford & Walster, 1973; Dion, Berscheid, & Walster, 1972; Miller, 1970). Miller, for instance, reported that unattractive persons are seen as significantly more insensitive, restless, unsure, submissive, sad, passive, and
rigid. Dion et al. found that attractive people are seen as more likely than unattractive individuals to possess almost every personality trait which had been determined to be socially desirable in a preliminary study. They are, for example, perceived as more likely to be sexually warm, sensitive, kind, interesting, strong, sociable, out-going, and also to have 'better character' than persons of lesser attractiveness. In addition, antisocial behaviors as well as objectively poor performance on tasks are more negatively evaluated when attributed to unattractive compared with attractive individuals (Dion, 1972; Efran, 1974; Landy & Sigall, 1974).

In a study specifically designed to investigate the attribution of psychological disturbance as a function of attractiveness, Jones, Hansson and Phillips (Note 3) had subjects choose from among a set of 20 photographs the one they judged to be "most probably disturbed" (i.e., most likely to have been confined to a psychiatric hospital or treated as an outpatient in a clinical setting). Less attractive stimulus persons (according to pre-ratings by another group of subjects) were chosen significantly more frequently than the more attractive. In addition, the less attractive target persons were rated as significantly more disturbed than the more attractive. In a study specifically designed to investigate the attribution of psychological disturbance as a function of attractiveness, Jones, Hansson and Phillips (Note 3) had subjects choose from among a set of 20 photographs the one they judged to be "most probably disturbed" (i.e., most likely to have been confined to a psychiatric hospital or treated as an outpatient in a clinical setting). Less attractive stimulus persons (according to pre-ratings by another group of subjects) were chosen significantly more frequently than the more attractive. In addition, the less attractive target persons were rated as significantly more disturbed than the more attractive. The strength of the attractiveness effect was demonstrated by Jones et al. (Note 3) in a partial replication of this study. In the replication, half of the subjects were told that attractiveness was unimportant in detecting psychological disturbance. They were then given photos of 40 males and asked to place them in one of ten categories ranging from "least disturbed" to "most disturbed."
Despite the initial warning, the overall effect for attractiveness was again significant. However, it should be noted that while significant correlations between attractiveness and attributed pathology were found for the male subjects under both the forewarned and not-forewarned conditions, they were not found for the female subjects under either condition.

Anecdotal material from a psychiatric setting also suggests that unattractive individuals are pre-labeled as mentally ill. Berscheid and Walster (1974) report that:

Others who work in mental hospitals (e.g., Sawicki, personal communication, 1972) have spontaneously suggested that the physical attractiveness level of a patient influences the degree of attention he receives from professionals and the intensiveness of the therapy given him by staff members (p. 209).

If this attention can be taken (at least partially) as an indication of high expectations for recovery (and not ignoring the self-fulfilling prophecy effect), then among persons pre-labeled as mentally ill, more attractive individuals are evaluated more positively (are basically more healthy and thus have a better prognosis?) than the less attractive.

Hypotheses

This study was an attempt to assess the usefulness of the pre-labeling concept for understanding the process by which individuals are labeled as mentally ill. Pre-labeling suggests that certain people are more likely than others to have such a label applied to their deviant behavior. Specifically, it was hypothesized that:
I: Women are pre-labeled as potentially more mentally ill than men. As a result, they will elicit more mental illness labeling in the absence of a specific act than will men.

II: Less attractive individuals are pre-labeled as potentially more mentally ill than more attractive persons. As a result, they will elicit more mental illness labeling in the absence of a specific act than will more attractive individuals.

In a study by Miller (1970) of the relative effects of attractiveness on the attribution of personality characteristics to females and males, it was reported that more attractive individuals of both sexes tend to have attributed to them positive characteristics of all sorts. Less attractive people, on the other hand, tend to be seen in terms of their respective sex-stereotypes. This suggests that a sex-based mental illness pre-labeling effect may be less strong for very attractive females. It was therefore further hypothesized that:

III: More attractive women will elicit less mental illness pre-labeling relative to more attractive men than will less attractive women compared with less attractive men.

Although no sex of participant differences were hypothesized, this variable was systematically manipulated. While there is some evidence that men and women respond differently to attractiveness in members of their own or the opposite sex (Miller, 1970; Jones et al., Note 3), these findings do not indicate what types of differences to expect in this study. In addition, there is no conclusive evidence that persons of one sex are more or less severe than the other in their attributions of maladjustment to women.
**METHOD**

**Design**

The students who participated in this study were presented with a two-alternative, forced-choice task. Each individual was given 21 pairs of photographs, told that one of the photographed persons in each pair was or had been mentally ill, and asked to indicate which of the two stimulus persons she or he thought was the mentally ill one. Black and white photos of 21 females and 21 males made up the pairs with 7 each of the females and of the males having been judged to be either of high, of moderate, or of low attractiveness.

**Participants**

Eighty-four white students, 42 women and 42 men who were enrolled in introductory psychology courses at the Ohio State University, participated in this study to partially satisfy a course requirement.

**Materials**

Selection of materials. An initial procedure was used to identify the attractiveness levels of 137 photographs of white, college-aged students. Sixteen white students (8 males and 8 females) who were

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3A parallel study using male medical students was initiated, though not completed, using an identical procedure. See Appendix B for details on this study.
enrolled in an introductory psychology course were asked to categorize photos of 86 females and 51 males in terms of attractiveness. To do this, they placed each photo in one of three categories with category 1 labeled as "least attractive" and category 3 labeled as "most attractive." Category 2 was numbered but not labeled. Earlier work had indicated that raters varied considerably as to the number of photos they placed in each of the three categories. The 16 raters were therefore asked to put equal numbers of photos in each category. Seven female and 7 male photos were chosen from each attractiveness category for use in the present study. Selected were those photos for which there was 75% or greater agreement as to the category of attractiveness to which the photo belonged. In the four cases in which there were more than 7 photos meeting that criterion, 7 were randomly chosen from these.

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4The photographs were taken by the author at three colleges in Columbus, Ohio. Individuals who agreed to be photographed were in street clothes and had had no advance notice to allow them to prepare for the photographic sitting. The age of each volunteer was ascertained, and only students between the ages of 17-25 years were photographed. Each photo was cropped just below the shoulders to a size of 2 x 2 1/2 inches and mounted on a white backing.

5Due to the uneven number of photographs, it was arbitrarily decided to have the judges put 28 female photos in category 2 and 29 photos in categories 1 and 3.
participant to see 21 pairs of photos representing all possible combinations of sex of stimulus person and 3 levels of attractiveness while not seeing any photo more than once. Also, it ensured that only 1 female and 1 male out of each 21 female and 21 male participants saw the same photo-pairs. Figure 1 shows the paired comparisons which each participant made. Each square of the figure represents one of the pairs of photographs from which the participants made their selections.

Experimenters

Three female and 3 male advanced level psychology majors who were blind to the hypotheses of this study served as experimenters. Each experimenter was randomly assigned 7 female and 7 male participants.

Procedure

Each participant was escorted to a small experimental room by her or his experimenter where the experimenter verbally gave the following introduction to and instructions for the experiment:

We are interested in people’s ability to make accurate predictions about other’s personality on the basis of facial cues alone. You will be shown a number of pairs of photographs. Some of the people whose pictures you will see are or have been mentally ill. From each pair of photographs you see, you are to indicate the one you think is the mentally ill person.

Here is a sample pair of photographs for you to practice on.

The student then was presented a pair of photographs in a plain white envelope and a form for indicating her or his choice. When the
student had made a choice and indicated an understanding of the task, the experimenter presented the 21 experimental pairs of photos (each of these photo-pairs was also in a plain, white envelope) with the following instructions:

There is a pair of photographs in each of these envelopes. I want you to make selections from each of these pairs just as you did for the sample pair. Take a pair of photos from the envelope, make your selection and mark it on the form, return the photos to the envelope, and then go on to the next pair.

The student was then left alone to complete the task.

After finishing the task, the participants were questioned about what they thought the intent and specific hypotheses of the experiment were. They were then debriefed and told that they could learn the results of the experiment at the end of the term. None of the students correctly identified either the intent or any of the hypotheses. However, in 2 cases, students said they recognized one of the photographed individuals. In these cases, the data were discarded.
RESULTS

In order to disguise the intent of this study, participants were presented with photo-pairs of the same sex and of the same level of attractiveness as well as pairs in which the sex and level of attractiveness of the stimulus persons were varied. However, the 6 comparisons made by each participant of stimulus persons of the same sex and same level of attractiveness were not used in the analysis. To determine the extent of a sex effect, each participant's choices from the 9 female/male photo pairs were analyzed. To determine attractiveness effects, only the data from the 12 photo-pairs which differed in level of attractiveness were used.

The participants choices are frequency data and thus most appropriately analyzed using nonparametric statistics. While the most powerful test to use for frequency distributions is a chi-square, this test requires that the entries in the contingency table be independent of each other (Siegel, 1956). Since the experimental procedure involved a repeated measures design in which each participant was asked to judge each condition, it could not be assumed that each individual's responses were independent of each other. Therefore, a categorization procedure was used in which each participant's responses were reduced to a single datum with the particular categorization procedure depending on the specific analysis of interest. In general, a participant's most frequent response in terms of the categories of interest
(i.e., sex, attractiveness, or sex and attractiveness) was taken as the datum for that participant. For example, in analyzing the participants' choices of female and male photos as mentally ill, if a participant chose a female photo more than half the time (5 or more female photos out of the 9 female/male photo-pairs), the participant's response was entered into the female-category cell of the female/male contingency table. In constructing tables of the participants' responses to attractiveness, it was possible that they might have chosen equal numbers of stimulus persons from two or more of the attractiveness or sex by attractiveness categories. In these cases, partial counts were kept (a 2-way tie counted 1/2 in each of the relevant cells) and these partial scores were summed after all the participants' responses were tabulated. Any final partial scores were allocated randomly to a cell using a random numbers table.

**Mental Illness and Sex**

In making choices between female/male photo pairs, 36 of the 84 participants chose female photos more than half the time while 48 chose male photos. A chi-square analysis of this distribution indicates that it is not significant ($\chi^2(1)=1.71$, n.s.). Thus, the participants were not more likely to choose the females or the males as mentally ill. Additional chi-square tests showed that sex of participant (Table 1) and sex of experimenter (Table 2) were not related to the participants' choices of female or male stimulus persons.
Mental Illness and Attractiveness

To test the hypothesis that unattractive stimulus persons would be chosen as mentally ill more frequently than more attractive individuals, each participant's choices of photos at each attractiveness level were summed. A contingency table of the frequencies with which participants chose one level of attractiveness of stimulus person more than the others was constructed (ties were dealt with as indicated above). A chi-square analysis of this distribution indicates that proportionately more participants chose less attractive stimulus persons as mentally ill (Table 3). Over 90% of the participants chose the least attractive stimulus persons as the mentally ill individuals. This tendency holds for both the female and the male stimulus persons considered separately (Table 4).

Sex and Attractiveness

The hypothesis of an interaction between the sex and attractiveness of the stimulus persons chosen as mentally ill was not supported. The distribution of the participants choosing female photos at the 3 levels of attractiveness did not differ from the distribution of participants choosing male photos at these levels (Table 5).

Sex of Participant and Attractiveness

Both female and male participants showed an effect for attractiveness, with significantly more participants of both sexes choosing the less attractive stimulus persons as mentally ill (Table 6). There
were no sex-of-participant by sex-of-stimulus-person interactions. Inspection of the data suggest that the female and male participants did not differ in their responses to the attractiveness of the female and male stimulus persons (Table 7). Since the expected frequencies in 2 of the 6 cells of the contingency table are less than 5, a chi-square analysis of these differences can not be made.
DISCUSSION

The results of this study support the hypothesis that unattractive persons are more likely to be pre-labeled as mentally ill than attractive individuals. However, there was no support for the hypotheses that women are pre-labeled mentally ill compared with men or that there is less pre-labeling of more attractive than less attractive women compared with more and less attractive men. In this section, these results will be discussed and the methodology critiqued. In addition, the implications of this study for the pre-labeling concept and for the process of social and clinical judgment will be considered and suggestions for further research indicated.

Hypothesis I: Mental Illness Pre-labeling and Sex of Stimulus Person

Participants in this study were no more likely to choose as mentally ill female than male stimulus persons. This finding suggests that contrary to the hypothesis, women are not pre-labeled as mentally ill in this society. Another possibility, however, is that college-aged individuals are so sensitized by the women's movement as to not exhibit some of the types of differentiations which the literature suggests are made between the sexes. During all of these students' socially aware years, the women's movement has actively and visibly called for equality between women and men on many levels. These
students may be among the first to show the effects of that socialization pressure. Additional research is required to determine if this generation does indeed differ from older generations in their basic assumptions about sex differences.

The finding of the present study disagrees with a recent study by Jones et al. (Note 3) who reported that men were more likely than women to be chosen as the "most probably disturbed" of their stimulus persons. Jones et al.'s college-aged subjects were presented with photos of ten female and ten male high school seniors, asked to indicate the level of psychological disturbance of each, and then to choose from the 20 photographs the one person who was the most probably disturbed. Males were selected as the target person significantly more frequently than females and were also attributed more pathology.

Methodological differences between the current study and that by Jones et al. may account for the discrepancy in results. Being presented with 20 photographs and asked to choose one as the most probably disturbed may have elicited a different response set from the Jones et al. subjects than did the task to select the mentally ill person from a pair of photographs. It is also possible that the instruction to choose the person who was "most probably disturbed" would seem a different task than to choose the person "who is or has been mentally ill." However, since Jones et al. introduced their subjects to the task by stating that some of the photographed individuals had "suffered a...form of psychological disturbance" and had undergone psychotherapy, it seems unlikely that the specific labels
used would have elicited such discrepant responses.

The dissimilar results may reflect differences in the ages of the stimulus persons in the two studies. The Jones et al. stimulus persons were high school seniors while the ages of the stimulus persons in the present study ranged from 17-25 years. The participants in the present study may have made distinctions among stimulus persons on the basis of apparent age, distinctions which may not have been possible for the Jones et al. subjects. A related possibility is that there are specific, age related notions about mental illness and that the present study elicited an entirely different response set than did the Jones et al. study. The ages of the stimulus persons will have to be clearly specified in any further studies of pre-labeling.

Hypothesis II: Mental Illness Pre-labeling and Attractiveness

As predicted by the pre-labeling model, less attractive persons were more likely than more attractive persons to be chosen as mentally ill. These results agree with those of Jones et al. (Note 3) who found significantly more unattractive than attractive persons selected as the most probably disturbed of their stimulus persons.

Jones et al. also found that unattractive target persons were judged as possessing more negative personality traits than attractive persons. A generalized tendency to attribute more negative characteristics to and to make more negative evaluations of unattractive than attractive individuals has also been reported by others (Clifford & Walster, 1973; Dion, 1972, 1973; Dion et al., 1972; Efran, 1974;
Landy & Sigall, 1974; Miller, 1970). The pervasiveness of this tendency is indicated by the range of persons who have made such attributions and about whom the attributions have been made. In addition to college students attributing negative characteristics to each other (Dion et al., 1972; Efran, 1974; Landy & Sigall, 1974; Miller, 1970), teachers have made similar attributions to elementary school children (Clifford & Walster, 1973; Dion, 1972), and elementary school children have made them of each other (Dion, 1973).

It is not clear whether the greater attribution of mental illness to unattractive compared to attractive persons reflects the overall greater attribution of negative personality traits to the unattractive or whether it reflects a general tendency to pre-label them in a more negative way. In either case, however, unattractive individuals clearly must contend with more negative expectations on the part of others than do attractive persons.

Hypothesis III: Mental Illness Pre-labeling and the Interaction Between Sex and Attractiveness

The hypothesis that the pre-labeling of women compared with men would be less strong for more attractive individuals was not supported. Females and males were not differentially responded to as a function of attractiveness level. This finding is consistent with the lack of support for the more general hypothesis that women would be pre-labeled as mentally ill compared with men.
Pre-labeling Reconsidered

While sex alone was not found to be related to the use of the mental illness label, the strong relationship between mental illness labeling and attractiveness furnishes support for the basic pre-labeling concept. Pre-labeling states that in assigning meaning to interactions, individuals make decisions about what has been said and done and what responses are called for. The results of the present study suggest that the attractiveness of the interactors—or of anyone who is party to a specific interaction—will affect the meanings assigned. An action may be assigned different meanings depending in part on the relative attractiveness of the actor.

The extent to which we are unaware of how the attractiveness of a stimulus person affects attributions made to that person is highlighted by a finding of the Jones et al. (Note 3) study. Jones and his colleagues reported that even when they explicitly warned their subjects that attractiveness was unimportant in detecting psychological disturbance, male subjects attributed more pathology to less attractive stimulus persons.

There was insufficient data to test for attractiveness pre-labeling among the male medical students (see Appendix B). However, studies by a number of investigators (Chapman, 1967, 1969; Chapman & Chapman, 1967; Temerlin, 1968; Langer & Abelson, 1974) demonstrating the influence of systematic bias in diagnostic and therapeutic judgments suggest that mental health professionals may not differ from laymen in pre-labeling
on the basis of attractiveness. It is not being suggested here that mental health professionals may consciously differentiate among their clients on the basis of their attractiveness. On the contrary, the notion of pre-labeling implies that those who pre-label are unaware of the underlying assumptions which give meaning to their social world. Rather, a finding of attractiveness-based mental illness pre-labeling by individuals whose training prepares them to observe objectively and to avoid making hurried judgments would indicate how pervasive and unquestioned is the response to attractiveness.

Implications, Limitations, and Suggestions for Future Research

The results of the present study add confirmation of the power of physical attractiveness to elicit a wide range of attributions. Especially relevant is the significance of these data to the social interaction process. The importance of understanding how specific characteristics such as attractiveness can affect the likelihood of a person being seen as mentally ill is underscored by the behavioral consequences of being seen as deviant or different. In studies in which individuals were portrayed as having a physical handicap (e.g., epilepsy, paralysis, amputation of limbs), subjects displayed a tendency toward behavioral constraint, physical distance, and decreased activity in the presence of the defective individuals (Kleck, 1966, 1968; Kleck, Buck, Goller, London, Pfeiffer, & Vukcevic, 1968; Kleck, Ono, & Hastorf, 1966). Freedman & Doob (1968) have also reported that when subjects were aware that another person had received a deviant score on a
'personality test,' the subjects shocked the deviant more and volunteered him more for painful tasks than they did controls.

Similar effects occur when the deviance is specifically depicted as mental illness. When interacting with individuals portrayed as mentally ill, subjects have administered shocks of longer duration to these individuals when they made mistakes, unjustly blamed them for inadequacies in their joint performance, preferred no further interaction with them, and liked them less than controls did their unstigmatized partners (Farina, Holland, & Ring, 1966; Farina & Ring, 1965). In addition, Friedman, Novotny, & Schwebel (Note 2) found that individuals portrayed as having been patients in a mental hospital were more likely than controls to have their verbal behaviors ignored during interaction with persons who were aware of their ex-patient status. As suggested by Friedman et al., a likely consequence of being labeled as mentally ill is a lowered rate of social reinforcement, a reduction which can result in decreased competence and a sense of decreased competence across a wide range of situations, feelings of depression, slowed activity, and decreased verbal behavior (Lewinsohn, Weinstein, & Shaw, 1969; Liberman & Raskin, 1971; Moss & Boren, 1972; Tennov, Note 4). Thus, while individuals who seek psychological help may already experience conflict in their relationships with others, a consequence of being labeled as mentally ill may be to exacerbate this conflict as well as to decrease the probability that the individual will engage in behaviors which could help alleviate the situation.
The results of the present study also have implications for the clinical judgment process. This study, of course, cannot be taken as a direct analog of the clinical process. Undergraduate students, not mental health professionals, were asked to make judgments about the mental health of individuals from photographs and with no face to face interaction. Indeed, few social situations, and certainly not therapeutic interviews, are structured so that one has no more information about another than was provided the participants in this study. More dynamic aspects of personality available in most social encounters—body cues and intonation, for instance—were not provided these students, thereby limiting the extent to which one can generalize these results to interactions of longer duration. In addition, each participant was required to make an attribution of mental illness for each pair of photographs even when they may have preferred to make none. Nevertheless, attractiveness had so strong an effect as to suggest that this variable merits investigation vis-a-vis the referral and diagnosis process. And, as noted earlier, attention should be paid to the ages of those about whom attributions of mental illness are being made as well as the ages of those who make those attributions.

Further investigation is also needed to determine whether the results of the present study can be obtained in naturalistic situations, both social and therapeutic. For instance, different attributions made to more or less attractive patients may affect the duration and outcome of therapy. The suggestion by Cavior (1970) that unattractive persons may experience less satisfying personal relationships and thus may be more likely to seek psychotherapy than attractive individuals also
merits study. Perhaps attractiveness pre-labeling reflects accurate assumptions about the social world.

A non-therapy setting which seems especially fruitful for studying mental illness pre-labeling would be an elementary school classroom. If pre-labeling is widespread, then it is undoubtedly taught to and practiced on children in this culture. A study of differential teacher behavior toward attractive and unattractive (black and white; middle-class and lower-class; female and male) children should illuminate some of the ways behaviors are responded to and individuals labeled.
APPENDIX A

PRE-LABELING VERSUS STEREOTYPING
PRE-LABELING VERSUS STEREOTYPING

The term pre-labeling is very consciously used for a concept which others may subsume under the rubric of stereotyping. Pre-labeling and stereotyping may be considered to lie at the opposite ends of a continuum. While stereotyping refers to the attitudes and beliefs of which we are more or less aware even as they influence our actions, pre-labeling refers to implicit, unquestioned and unverbalized assumptions about the nature of the social world. In addition, pre-labeling differs from stereotyping in its theoretical assumptions about the nature of reality, in the questions it asks, and in its approach to these questions from a sociological rather than an individual perspective.

The notion of stereotyping, as Brigham (1971) pointed out, is based on the conceptual work of Walter Lippmann (1922). Lippmann defined stereotypes as "factually incorrect, produced through illogical reasoning, and rigid" (Brigham, 1971, p.15). In investigating the concept of stereotyping, others have used such definitions as (1) incorrect generalizations (Katz & Braley, 1933; Klineberg, 1951; Prothro & Melikian, 1954), (2) generalizations which may be partially correct (Allport, 1954; Campbell, 1967; Krech, Crutchfield, & Ballachey, 1962; Rokeach, 1968; Schoenfeld, 1942), (3) any generalization (Abate & Berrien, 1967; Brown, 1958; Child & Doob, 1943;
Edwards, 1940; Sherif & Sherif, 1969), (4) categorical responses (i.e., "membership in a category is sufficient to evoke the judgment that the stimulus person possesses all the attributes belonging to that category" [Secord, 1959, p. 309]), and (5) products of a faulty thought process (Sanford, 1956; Bogardus, 1950; Fishman, 1956; Sawadski, 1948).

While this list is not exhaustive, it is at least indicative of the general lack of specific consensus about what a stereotype is. In addition, this list highlights a basic problem with the theoretical approaches to stereotyping. That is, these definitions assume the existence of an ultimate truth or reality of which the stereotype is a mere shadow or distortion. It is based on a Platonic idealism which is at odds with an empirical scientific orientation. Stereotyping is also theoretically elitist in that it implies that some individuals are able to see the truth, are able to reason correctly—and thus are able to know the world as it really exists—while others stereotype. The basic theoretical assumption of pre-labeling, on the other hand, is that all realities are humanly produced and that there thus can be no ultimate reality against which to measure these productions.

Unlike stereotyping, then, the concept of pre-labeling does not question the truth or validity of the categories of meaning individuals use in making sense of their world. It also does not, as stereotyping does, speak to the question of the desirableness of whatever categories of meaning are uncovered. In his critique of the attitude of investigators toward stereotypes, Brown (1958) states that "they think it at least irrational and probably wicked to subscribe to them" (p. 364).
He then goes on to ask the question:

Is it possible that the social psychologist has used the word **stereotype** to stigmatize beliefs of which he disapproves but which he does not know to be false? Has he perverted his science to achieve a moral purpose? (p. 366)

The pre-labeling concept questions neither explicitly nor implicitly the desirability of the categories of meaning extant in the culture.

Finally, pre-labeling is concerned with sociological rather than individual processes. While stereotyping deals with those inside-the-head distortions (faulty thought processes) which produce an individual's view of the world, pre-labeling is concerned with the sociological processes by which categories of meaning are used in making social situations comprehensible.
APPENDIX B

PRELIMINARY STUDY WITH MEDICAL STUDENTS
In order to more closely approximate the responses of mental health professionals, a parallel investigation to the present study was begun with male medical students who had had a psychiatric rotation as participants. The design and procedure for this study were identical to that used with the undergraduates except that initial contact with the medical students was made by letter (see Appendix C) while the undergraduates were contacted through their introductory psychology classes.

Letters were sent to 142 male medical students of whom 97 were contacted a week later by phone. Of the 45 who were not contacted, 24 had disconnected phones with no forwarding number, 2 were now practicing physicians, and 7 had out of town rotations and were unavailable. Of the 97 who were contacted, 26 were willing to participate and 14 were scheduled for the first week of testing. Of these, 6 appeared at

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6 The Latin square design used in this study to systematize the presentation of the photo-pairs to the participants necessitated having multiples of 21 participants of each sex. It was originally decided to have 21 male and 21 female medical students from the Ohio State University School of Medicine participate in the study. However, there were only 24 women medical students who had had a psychiatric rotation who were still enrolled at the time of this study. Since it seemed unlikely that 21 of these women would be both available and willing to participate, it was decided to use only males.

7 Due to prior scheduling of the undergraduate participants, only one week of testing with the medical students was scheduled at this time. The other students were told that they would be contacted in two weeks for scheduling.
their appointed times. Of those who did not appear, 6 reported conflicts with their clinical duties and 2 indicated that they had forgotten. Due to the high percentage of no-shows among the medical students and the difficulty in scheduling them around their clinical commitments, it was decided at this time not to pursue this phase of the study.8

The small number of participants precludes a statistical analysis of the data collected from these medical students. However, examination of the data showed that 5 of the 6 medical students chose more male than female photos from the female/male pairs. In addition, all 6 chose the least attractive stimulus persons more frequently than stimulus persons representing either of the other two levels of attractiveness. Further study is necessary to determine whether these tendencies would be stable over a larger sample and whether they would be obtained with experienced mental health professionals.

8Those medical students who had indicated a willingness to participate in the study but who had not yet been scheduled were contacted and informed that the study had been discontinued.
APPENDIX C

SOLICITATION LETTER SENT TO MEDICAL STUDENTS AT

THE OHIO STATE UNIVERSITY MEDICAL SCHOOL
Dear

I am writing to ask your help in a research project on identifying the mentally ill which I am conducting for my dissertation in Clinical Psychology. Since you have completed your Psychiatry rotation and have had contact with mentally ill individuals, I feel that you would be in a position to make these identifications.

The central question I am asking is whether individuals who are or who have been mentally ill convey that information in non-verbal ways to others, specifically in their facial expressions. For this research, I am asking participants to select from a large number of photographs those of persons they think are or have been mentally ill.

I would appreciate your considering participating in this research—your participation would involve only 45 minutes to an hour of your time. I will contact you by phone in the next few days to answer any questions you might have about this project and to see if you will be able to help me in this study.

This research project has been approved by the OSU Behavioral Sciences Review Committee and the Department of Psychiatry attending staff.

I appreciate your considering this request.

Sincerely,

Margaret Novotny
REFERENCE NOTES


REFERENCES


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Table 1

Comparison of the Frequency Distribution of Female and Male Participants by Most Frequently Chosen Sex of Photo as Mentally Ill (Female/Male Pairs Only)

<table>
<thead>
<tr>
<th>Sex of Photos</th>
<th>Sex of Participant</th>
<th>Row Totals</th>
<th>$f_e$</th>
<th>$X^2$</th>
<th>$p^a$</th>
</tr>
</thead>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Column Totals</td>
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<td>42</td>
<td>84</td>
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<td></td>
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</tbody>
</table>

$^a_{df = 1}$
Table 2

Comparison of the Frequency Distributions of Participants by Most Frequently Chosen Sex of Photo as Mentally Ill by Sex of Experimenter (Female/Male Pairs Only)

<table>
<thead>
<tr>
<th>Sex of Photos</th>
<th>Sex of Experimenter</th>
<th>Row Totals</th>
<th>$e_o$</th>
<th>$X^2$</th>
<th>$p^a$</th>
</tr>
</thead>
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<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>Male</td>
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<td>48</td>
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<td>Column Totals</td>
<td>42</td>
<td>42</td>
<td>84</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a_{df = 1}$
Table 3

Frequency Distribution of Participants by Attractiveness

Level of Photo Most Frequently Chosen as Mentally Ill

<table>
<thead>
<tr>
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<th>Attractiveness</th>
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<th>$X^2$</th>
<th>$p^a$</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td>All</td>
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<td>6</td>
<td>2</td>
<td>28</td>
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$^a{df} = 2$

Table 4

Frequency Distribution of Participants by Sex and Attractiveness Level of Photo Most Frequently Chosen as Mentally Ill

<table>
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</tbody>
</table>

$^a{df} = 2$
Table 5

Comparison of the Frequency Distributions of Participants

Most Frequently Choosing as Mentally Ill Levels of

Photo Sex and Attractiveness

<table>
<thead>
<tr>
<th>Sex of Photos</th>
<th>Attractiveness</th>
<th>Row Totals</th>
<th>$\chi^2$</th>
<th>P$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$f_o$</td>
<td>37</td>
<td>7</td>
<td>2</td>
<td>46</td>
</tr>
<tr>
<td>$f_e$</td>
<td>33.40</td>
<td>10.95</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.72</td>
<td></td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$f_o$</td>
<td>24</td>
<td>13</td>
<td>1</td>
<td>38</td>
</tr>
<tr>
<td>$f_e$</td>
<td>27.60</td>
<td>9.05</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column Totals</td>
<td>61</td>
<td>20</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

$^a$df = 2
Table 6

Frequency Distribution of The Female Participants and the Male Participants Most Frequently Choosing as Mentally Ill Levels of Photo Sex and Attractiveness (All Photo Pairs)

<table>
<thead>
<tr>
<th>Photos</th>
<th>Attractiveness</th>
<th>$f_e$</th>
<th>$\chi^2$</th>
<th>$p^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Female Participants**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>17</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>

**Male Participants**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>20</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

$^a$df = 2

$^b$n = 42
Table 7

Frequency Distributions of Female and Male Participants
by the Attractiveness Level of the Female Photos
and the Male Photos (All Photo Pairs)

<table>
<thead>
<tr>
<th>Participant Sex</th>
<th>Attractiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Female Photos</td>
<td></td>
</tr>
<tr>
<td>Female&lt;sup&gt;a&lt;/sup&gt;</td>
<td>17</td>
</tr>
<tr>
<td>Male&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20</td>
</tr>
<tr>
<td>Male Photos</td>
<td></td>
</tr>
<tr>
<td>Female&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12</td>
</tr>
<tr>
<td>Male&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12</td>
</tr>
</tbody>
</table>

<sup>a</sup><sub>n = 42</sub>
Photo A

Level of Attractiveness

<table>
<thead>
<tr>
<th>Level of Attractiveness</th>
<th>Female Photo</th>
<th></th>
<th>Male Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Female Photo</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Photo</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FIGURE 1

Diagram Showing the 21 Paired Comparisons Made by Each Participant. Each Participant Compared an A Photo with a B Photo at Each Level.

Note: Shaded squares indicate replications of comparisons. These comparisons were not made.