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MAGICAL CONTAGION AND AIDS SCALE:
DEVELOPMENT AND VALIDATION

THESIS

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By

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A Magical Contagion and AIDS Scale was developed to address problems with existing Contagion and AIDS measures. Magical Contagion is an influence that exists after contact is terminated. It is comprised of Permanence, Holographic Effects, Moral Germ Conflation and Backward Action. Data from 280 undergraduates revealed low mean levels of Magical Contagion and AIDS. Contagion effects did not differ on demographic variables. Content validity, criterion-related validity, discriminate validity, and internal consistency were evaluated. Significant correlations were found between the Contagion Scale and Merging/Separation and Homophobia Scales. Negative correlations were found between the Contagion scale and the AIDS knowledge and social desirability scales. Alpha reliabilities were high ($\alpha > .93$) for the Contagion scale and subscales. Factor analysis suggested the existence of a single factor and mixed support for three factors.

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CHAPTER I

INTRODUCTION TO THE STUDY

The public's general concern about AIDS (acquired immuno-deficiency syndrome) has increased. AIDS is no longer viewed as an exclusively homosexual/IV drug user disease. It is spreading rapidly in the general young adult population. The number of cases among the heterosexual population is doubling every 14 to 16 months (Petosa & Jackson, 1991). The overall public reaction to AIDS has been negative, fearful, and irrational (Pryor, Reeder, Vinacco, & Kott, 1989). This increased concern has elicited research that attempts to explain people's beliefs and attitudes about sexually transmitted diseases in general, and AIDS in particular. The focus of much AIDS literature is on the underreaction to AIDS risk situations since this places persons in danger of contracting AIDS and spreading AIDS to others. There may also be a paradoxical overreaction to non-contagious AIDS situations which causes difficulty for persons seeking jobs, education, and social interaction (Nemeroff, Brinkman, & Woodward, 1992).

Theories Predicting AIDS Preventive Behaviors

Despite negative, fearful, and irrational reactions to AIDS situations persons have continued to engage in AIDS risk behaviors (Ross & Rosser, 1989; Walter, Vaughan,

Gladis, Ragin, Kasen, & Cohall, 1992). Failure to increase preventive health behaviors has elicited various explanations. These explanations include: AIDS Knowledge (Hoffman, 1992; Kegeles, Adler, & Irwin, 1988; Kelly, St. Lawrence, Hood, & Brasfield, 1989; Manning, Balson, Barenberg, & Moore, 1989; McCaig, Hardy, & Winn, 1991), The Health Belief Model (Hayes, 1991; Petosa & Jackson, 1991; Rosenstock, 1974), Homophobia (Kelly, St. Lawrence, Smith, Hood, & Cook, 1987; Larsen, Serra, & Long, 1991; St. Lawrence, Husfeldt, Kelly, Hood, & Smith, 1990), Germ Theory (Martin & Vance, 1984), and Magical Contagion (Frazer, 1922; Mauss, 1972; Nemeroff, Brinkman, & Woodward, 1990; Nemeroff & Rozin, 1992).

AIDS Knowledge. A lack of knowledge about AIDS transmission and infection is one explanation for both underreaction to AIDS risk situations and under use of AIDS preventive health behaviors. Persons may be uninformed or misinformed about AIDS transmission, or the seriousness of the disease. Studies have investigated knowledge about AIDS in various populations (Hoffman, 1992; Kegeles, Adler, & Irwin, 1988; Kelly et al., 1989; Manning, Balson, Barenberg, & Moore, 1989; McCaig, Hardy, & Winn, 1991). Kegeles et al. (1988) studied contraceptive use and knowledge of risk behaviors in a group of adolescents ages 14-19. Results indicated that adolescents understood the importance of using contraceptives, but they were still sexually active,

had multiple partners, and did not notably increase condom use as a result of increased knowledge. Gray and Saracino (1989) studied a group of college students and found that 87% were not concerned about contracting AIDS even though they had knowledge about AIDS transmission. Many studies show that persons know the facts about AIDS, but fail to exercise preventive behaviors in risk situations (Kelly et al., 1989; Nemeroff et al., 1992; Ross & Rosser, 1989). In light of these findings, there is need for further investigation of reactions to AIDS situations and use of preventive health behaviors beyond theories of AIDS based only on knowledge.

Health Belief Model. The Health Belief Model is a theory that was first developed in the 1950s by social psychologists for the United States Public Health Service. It was designed to help understand failure to use preventive measures such as immunization and screening tests to detect asymptomatic diseases like Tuberculosis (Jette, Cummings, Brock, Phelps, & Naessens, 1981). It has since been expanded to explain goal attainment motivation in general medical contexts. It continues to provide an explanation for possible reasons for failure to use preventive health and screening behaviors.

Knowledge of the disease is a presumption of the Health Belief Model. Once knowledge is obtained, several factors concerning health beliefs and behaviors come into play.

Perceived Susceptibility concerns persons' perceptions of how likely they are to contract a particular disease.

Perceived Seriousness or Severity concerns persons' perceptions of the severity of the disease and how the disease will affect various aspects of their lives.

Perceived Benefits concerns persons' beliefs about their ability to alter their behaviors in a way that will prevent disease. Perceived Barriers concerns persons' beliefs about unpleasantness, inconvenience, and expense of altering these behaviors. Cues to Action is a factor that was later added to the model. Cues, whether internal or external, must exist for persons to change behaviors, despite beliefs concerning Susceptibility, Severity, Benefits, and Barriers (Hayes, 1991; Petosa & Jackson, 1991; Rosenstock, 1974).

Literature on the Health Belief Model specific to AIDS suggests that the model is useful in the prediction of intention to engage in AIDS preventive health behaviors (Cochran & Peplau, 1991; Hayes, 1991; Hoffman, 1992; Manning et al., 1989).

Homophobia. Homophobia provides an explanation for persons' overreaction to non-contagious AIDS situations and attempts to predict preventive health behaviors. Homophobia is a phobia towards, or a fear of homosexuals. Related to Homophobia is Homosexism which is a term describing prejudicial attitudes towards homosexuals (Hansen, 1982). Homophobia and Homosexism are common issues in AIDS

literature because AIDS was originally thought to be strictly a homosexual disease. When considering large populations of people, prevalence rates are still highest among the homosexual population, but these prevalence rates are now increasing more rapidly among the heterosexual population.

It is still the case that attitudes towards homosexuals and attitudes towards AIDS often go hand in hand (Kelly, St. Lawrence, Smith, Hood, & Cook, 1987; Larsen, Serra, & Long, 1991; St. Lawrence, Husfeldt, Kelly, Hood, & Smith, 1990). Kelly et al. (1987) found that medical students' negative attitudes towards AIDS paralleled their negative attitudes towards homosexuality. St. Lawrence et al. (1990) also found that college students' attitudes towards AIDS paralleled their attitudes towards homosexuals. Similarly, Larsen et al. (1990) found that attitudes towards AIDS infected individuals was a function of college students' attitudes towards homosexuals. It is thus important to examine Homophobia and/or Homosexism as an explanation for persons' overreaction to non-contagious AIDS situations and to consider it a possible predictor of preventive health behaviors.

Germ Theory. Germ theory also predicts intention to engage in preventive health behaviors. This biologically based theory suggests that disease vectors (i.e. germs, viruses) are transmitted from a source to a recipient

through contact (Nemeroff, Brinkman, & Woodward, 1990). Germ theory specific to AIDS suggests that transmission occurs through biological, viral pathogens that destroy immune system functioning (Martin & Vance, 1984). If persons are aware of the biological mode of AIDS transmission, they may be more likely to engage in preventive health behaviors.

Magical Contagion. The present study is concerned with Magical Contagion as a currently underdeveloped area of research. Magical Contagion complements Germ Theory by serving as an additional explanation for people's overreaction to AIDS infected persons as well as their underreaction to AIDS risk situations. Because it attempts to explain these reactions it is important to consider Magical Contagion as a factor that helps predict intention to engage in AIDS preventive health behaviors. The Law of Contagion is one of the Laws of Sympathetic Magic deduced by anthropologists in the late 19th and early 20th centuries (Frazer, 1922; Mauss, 1972). These laws were developed by studying beliefs common to various traditional cultures and religions. The Laws of Sympathetic Magic are based on the scientific principle of causality (Frazer, 1922; Mauss, 1972). Because these laws are widespread and of a scientific orientation, they are considered common to human thought (Rozin & Nemeroff, 1990). The Law of Contagion suggests that when persons or things come into contact with

one another, they elicit an influence that goes beyond physical disease vectors and continues to exist even after contact is terminated (Nemeroff et al., 1990). The nature of this influence can be physical or moral/interpersonal and it can have either harmful or beneficial effects (Nemeroff et al., 1992). According to Nemeroff and Rozin (1992), the moral/interpersonal versus the physical aspects of Contagion suggest that transmission from physical sources (particular diseases) is different from transmission from moral/interpersonal sources (particular persons). According to Rozin, Nemeroff, Wane, and Sherrod (1989), harmful versus beneficial effects of Contagion suggest that contact of an object by a loved or respected other can enhance the value of the object, whereas contact of an object by a disliked or evil other can devalue the object. For example, Rozin et al. (1989) found that research participants felt better about wearing a laundered sweater that once belonged to a lover (enhanced value) as opposed to a laundered sweater that belonged to a disliked other (devaluation).

Literature suggests several characteristic features of Magical Contagion. Contact, Permanence, and Backward Action are associated with Contagion in general. Holographic Effects and Moral Germ Conflation may only be associated with Contagion and AIDS and will be discussed in that context. According to the Law of Contagion, direct or indirect physical contact is important in transmission of

contagious entities (Frazer, 1922; Mauss, 1972). Permanence suggests that the contagious entity exists after contact is terminated. It further suggests that the entity cannot be dissolved or biologically disinfected. The contagious entity can reside in objects or belongings of persons, as well as in the persons themselves. Nemeroff and Rozin (1992) found that various cleaning methods only slightly reduced Contagion effects. Backward Action, a less well documented characteristic, suggests that the contagious entity is not only transferred from source to recipient, but also from recipient to source. Rozin, Markwith, and Nemeroff (1992) found that a few people seemed more positive about a healthy man buying a fork they had used than a man with AIDS buying the fork.

Contagion has been studied in several contexts including: disgust measures (Nemeroff & Rozin, 1989; Rozin & Fallon, 1987; Rozin, Millman, & Nemeroff, 1986); food contamination (Nemeroff & Rozin, 1989; Stein & Nemeroff, 1993); interpersonal domains (Nemeroff & Rozin, 1992; Rozin, Nemeroff, Wane, & Sherrod, 1989), and disease vectors (Nemeroff & Rozin, 1992). In general, Contagion effects appear to be "patchy" such that persons display some Contagion effects only some of the time in some situations (Nemeroff et al., 1990; 1992).

Rozin et al. (1986) examined the Law of Contagion across several domains. Participants were recruited by

advertisements for a study about food preferences. They were asked to respond to questions regarding various stimulus situations in which offensive objects came into contact with food. Subjects rated their feelings about contamination of the objects. Results suggested significant negative Contagion effects based on the contamination of food by offensive objects. Rozin and Fallon (1987) further discussed the effects of offensive objects on food. The objects were found to have contamination properties that, by coming into contact with certain foods, rendered the foods inedible.

Stein and Nemeroff (1993) studied Magical Contagion under the principle "You are what you eat" (p. 50). This principle suggests that Contagion effects occur through the essence of food, such that a person gains some of the characteristics of the food. Undergraduates rated persons based on bogus profiles containing types of food they like to eat as well as preferred activities, fitness level, height, and weight. Results suggested that moral judgements of persons are made based on what they eat. This supports the concept of Magical Contagion in that food essence has an affect on others' perceptions of one's personal characteristics.

Nemeroff and Rozin (1992) examined Contagion effects and the nature of the contagious entity. Subjects of various ethnicity, age, and socioeconomic status were

recruited. Various sources of Contagion which measured positive versus negative and moral versus physical properties of Contagion were presented, followed by various purification methods which were said to undo Contagion effects. Results suggested Contagion effects consistent with previous literature. The nature of the contagious entity was different depending on whether it was positive or negative and moral or physical.

Rozin et al. (1989) examined positive and negative Contagion effects and forward and backward Contagion. Adult volunteers, students, and hospital office staff answered questions assessing various positive and negative sources of Contagion in both forward and backward transmission situations. Results suggested that negative effects of contact through negative sources were stronger than positive effects through positive sources. Also, although forward Contagion effects were apparent, backward Contagion effects were lacking.

Magical Contagion and AIDS. Features of Magical Contagion are demonstrated in people's thinking about AIDS (Nemeroff et al., 1990; 1992). Permanence suggests that the contagious entity remains after contact has stopped. This entity cannot be dissolved or disinfected. Nemeroff et al. (1992) found that subjects demonstrated over-sensitivity to the use of washed silverware that had been used by an HIV infected person. Also, subjects believed that the contagion

effect or contagious entity would not wear off the silverware until a year after contact had terminated.

Holographic Effects, which has been studied specifically in the context of AIDS, suggests that the contagious entity subsumes its source. Holographic Effects may take the form of Dose Insensitivity and/or Route Insensitivity. Dose Insensitivity suggests that the contagious entity can be transferred with minimal contact. For example, Rozin et al. (1992) found that even very short contact with a sweater worn by an AIDS infected individual was sufficient to demonstrate Contagion effects. Route Insensitivity suggests that contact with any part of the source is equivalent. For example, Nemeroff et al. (1992) found that there was no place on an AIDS victim's body that subjects would feel as comfortable touching as a healthy stranger's body.

Backward Action suggests that the contagious entity is not only transferred from source to recipient, but also from recipient to source. Nemeroff et al. (1990) asked subjects to rate their feelings about a person with AIDS being admitted into the same hospital bed from which they had just been discharged. Results indicated Backward Action effects for a minority of subjects.

Moral Germ Conflation, which has been studied specifically in the context of AIDS, suggests that the contagious entity is evil and there is no distinction

between moral and physical characteristics. For example, a person who is morally "bad" or who has acted immorally will be plagued with physical illness (Nemeroff et al., 1990). Contagion effects in the context of Moral Germ Conflation may occur when someone seen as immoral, such as a criminal or a drug user, is infected with AIDS, is viewed as deserving of the illness, and is therefore a source of Contagion.

Studies on Contagion and AIDS reveal that persons tend to show an overreaction to non-contagious situations. Nemeroff et al. (1990) assessed overreaction to non-risk situations based on the above four factors: Permanence, Holographic Effects, Moral Germ Conflation, and Backward Action. Subjects responded to questions about knowledge and feelings about AIDS, including items specific to the features of Contagion. Results revealed that, although persons were knowledgeable about AIDS transmission, they displayed over-sensitivity to non-risk situations. Subjects clearly displayed Permanence and Holographic Effects. Although Backward Action and Moral Germ Conflation effects were small, subjects still displayed Magical Contagion consistent with these features.

Rozin, Markwith, and MaCauley (1990) examined a moral component as an explanation for illness (Moral Germ Conflation). Undergraduates responded to Contagion scenarios that assessed Contagion by asking questions about

a sweater worn by a man who was infected with HIV. Both physical and moral components of Contagion were displayed in aversion to the sweater.

Rozin et al. (1992) examined the relationship between four characteristics Magical Contagion and college students' attitudes about AIDS. Results suggested that Magical Contagion is a plausible explanation for feelings and attitudes about AIDS. All Contagion effects were significant, but Backward Action displayed the weakest effect, consistent with previous literature.

The Law of Contagion also serves as an explanation for underreaction to AIDS risk situations. Nemeroff et al. (1992) studied reactions to various sources of Contagion. Undergraduates responded to questions assessing features of Magical Contagion, including items assessing Moral Germ Conflation. Results revealed that reactions to a particular source and the presence of Magical Contagion vary depending on the relationship to the source. For example, a loved one infected with HIV may be perceived as less threatening than an enemy infected with HIV.

Another study by Nemeroff (1992) examined whether or not persons conceived of germs as being more or less threatening depending on the source. Undergraduates drew germs of various sources including: self, stranger, lover, and disliked person. Results suggested that disliked persons' germs were more threatening and lovers' germs were

less threatening, thus supporting the use of Magical Thinking. This Magical Thinking could lead to an overreaction concerning contact with disliked persons and an underreaction concerning contact with a lover causing vulnerability to AIDS risk situations.

Magical Contagion is a relatively new area of psychological study. Previous literature has addressed Contagion using an anthropological approach. Studies on Contagion, specifically those on Contagion and AIDS, have theoretically defined Magical Contagion and its features theoretically. However, there is a lack of empirical evidence for the existence of Contagion. Studies that address psychometric properties of Contagion are limited in number (Nemeroff & Rozin, 1992; Stein & Nemeroff, 1993). Further, there are no studies specific to Contagion and AIDS that address psychometric properties of scales.

Magical Contagion and AIDS Scales

Current Contagion scales contain few items, thus limiting the range of Contagion that is measured. For example, Nemeroff et al. (1990) addressed only one Contagion situation for each of the features of Contagion. Items used in existing measures of Contagion also seem to address situations unlikely to occur, therefore they increase the difficulty of subjects' response because items may be hard to imagine or seem unrealistic. For example, Rozin et al. (1992) assessed Contagion effects with a sweater worn by an

AIDS infected individual and a fork previously used by an AIDS infected individual. These events are somewhat contrived and probably do not occur in most people's everyday experiences. In addition, few scales attempt to specially measure Magical Contagion and AIDS.

Existing Magical Contagion scales generally fail to discriminate Contagion and AIDS items from items that tap constructs like homophobia or general negative attitudes towards HIV/AIDS infected individuals. Also, the possibility that Contagion effects may be elicited by proximity to persons with AIDS (such as being in the same room with them or within a certain distance), in the absence of direct or indirect contact, has not been explored. Physical proximity may elicit Contagion effect because the source of threat is salient

Given the importance of examining both overreaction to non-contagious AIDS situations and underreaction to AIDS risk situations, and of predicting preventive health behaviors, it is necessary to develop a Magical Contagion and AIDS Scale that addresses the shortcomings of past research on Magical Contagion and AIDS. Such a scale should address the above mentioned problems: lack of empirical, as well as theoretical, support; insufficient items to cover the entire domain of Contagion; lack of items that consist of situations that are likely to occur; and lack of items that discriminate Contagion from related constructs.

Some issues that should be considered when developing a scale include: high internal consistency reliability, predictive validity, criterion-related validity, content validity, discriminate validity, and construct validity (cf. DeVellis, 1991). Because there is currently no valid Contagion and AIDS scale, with demonstrated reliability and validity to serve as a comparison, predictive validity and construct validity would be difficult to address. However, should be considered in additional studies, along with temporal stability, after establishing a reliable and valid Contagion and AIDS scale.

Hypotheses

Hypothesis 1: Correlations with Other Scales

1A. The Contagion and AIDS Scale will correlate with the Merging/Separation Inventory (a scale that measures desire to merge or separate with negative and positive people) and the Homophobia Scale (a scale that measures fear of, or negative attitudes towards, homosexuals) because these scales measure similar constructs.

1B. The Contagion and AIDS Scale should not correlate with the Merging/Separation Inventory or the Homophobia scale at or near unity after a correction for attenuation due to unreliability (Pedhazur, 1982). This would result in failure to discriminate Magical Contagion and AIDS from the constructs of Merging/Separation or Homophobia.

1C. The Contagion and AIDS Scale will not be correlated with AIDS knowledge scales. Magical Contagion and AIDS is suggested to be independent of knowledge about AIDS as evidenced by results from previous literature (Nemeroff et al., 1992).

Hypotheses 2: Factor Structure of Contagion and AIDS Scale

2A. The factor structure of the Magical Contagion and AIDS Scale is similar to that predicted by the theory of Contagion and AIDS (Nemeroff et al., 1990; 1992). It will include factors that contain items tapping Permanence, Holographic Effects, and Moral Germ Conflation.

2B. Permanence and Holographic Effects might group together because of the similarity of these constructs.

2C. Backward Action will not be a factor that measures Contagion effects because of weak support for its existence in literature (Nemeroff et al., 1990).

Research Question

In addition to these hypotheses, the following research question will be examined:

1. Does position of control items (i.e., items that contain the same situations as the Magical Contagion and AIDS items, but do not involve AIDS infected individuals) effect response to Contagion items?

CHAPTER II

METHOD

Subjects

One hundred sixty-six undergraduates, primarily from General Psychology courses at the University of North Texas, and 40 advanced undergraduates served as participants for pilot data collection. Two hundred eighty undergraduates, primarily from General Psychology courses at the University of North Texas served as participants in the main study. Subjects were asked to read a brief information sheet that explained the study and served as an informed consent form. They then completed an anonymous questionnaire consisting of several scales.

Measures

Demographics. Participants completed a twelve-item questionnaire of basic demographic information (see Appendix C). This information was used to assess gender differences and effects of other background variables in relationship to Contagion and AIDS effects.

Magical Contagion and AIDS Scale. Preliminary item generation was conducted by examining items from Magical Contagion and AIDS scales used in previous research (Nemeroff et al., 1990; Rozin & Nemeroff, 1990). Pilot items were devised by revising and expanding the content of

items from those scales. This preliminary item pool was presented to a group of approximately 8 graduate students from the Psychology Department at the University of North Texas who evaluated content, wording, and appropriateness of items. A short explanation describing Contagion and each of the features of Contagion with specific examples from previous Contagion literature (Nemeroff & Rozin, 1992; Nemeroff et al., 1990; 1992; Rozin et al., 1990) was given to these raters. Raters were asked to evaluate item content by rating item relevance on a three-point scale: "Relevant," "Somewhat Relevant," and "Not Relevant." They were also asked to judge wording and clarity of items.

Items were included to reflect each of the four features of Contagion: Permanence, Holographic Effects, Moral Germ Conflation, and Backward Action. Permanence and Holographic Effects were combined into one factor because items that measure these features separately could not be constructed. For example, if a person with AIDS comes into contact with an object and transmits an essence, the essence remaining after contact is terminated is Permanence, and the essence spread to an object touched by a person with AIDS is Holographic Effects. Permanence was only assessed based on the idea that the transmitted essence remains after contact is terminated. In the literature, Permanence also suggests that the essence cannot be dissolved or disinfected. This aspect was not assessed because items would have to be

repetitive in content (e.g., an object would be disinfected by various modes over various periods of time, demonstrated by separate items for each mode and time) to include various stages of disinfection (Nemeroff & Rozin, 1992). This would require an excessive number of similar items and was judged as impractical as it would not allow for inclusion of various items from the other features of Magical Contagion and AIDS.

Non-contact items that comprised situations involving HIV/AIDS infected individuals that are similar to those presented in the actual Contagion items, but that do not involve either direct or indirect contact were included (see Appendix B). Non-HIV/AIDS control items that address the same situations as the Contagion items, but that do not involve HIV/AIDS infected individuals were included as well (see Appendix C). Order of these non-HIV/AIDS control items was manipulated for pilot data collection by providing subjects with two versions of the Magical Contagion and AIDS Scale. In one version each control item directly preceded its corresponding Contagion item. In the second version all control items were listed in a separate section following the Contagion items. This was done to see if exposure to control items, prior to answering Contagion items, affected response to Contagion items.

Items were revised and supplemented based on suggestions from raters and from pilot data collection in

pilot study 2. Items were randomized to assist in disguising the construct being measured by interspersing items from each of the features of Contagion: Permanence/Holographic Effects, Backward Action, Non-contact, and Moral Germ Conflation.

The Magical Contagion and AIDS Scale included forty-four Magical Contagion and AIDS and Non-contact items, and thirty-seven control items (Oizumi & Guarnaccia, 1993). This scale was entitled "Your comfort in HIV/AIDS situations." The scale uses a seven-point Likert-type rating scale with responses ranging from "extremely comfortable" to "extremely uncomfortable" (see Appendix C).

Merging/Separation Inventory. Shupack-Neuberg and Nemeroff (in press) developed a forty-three item Merging/Separation Inventory assessing persons' desire to merge with or separate from various people, including negative people, positive people, and mother, on a physical level. This scale uses a nine-point Likert-type rating scale with responses ranging from "extremely bad" to "extremely good" (see Appendix C). Alpha internal consistency for a group of undergraduates and test-retest reliability over a two week period was computed for each section of the scale. The negative person section revealed an alpha internal consistency of $\alpha = .95$ and test-retest reliability of .91. The positive person section of this inventory revealed an alpha internal consistency of .88 and

test-retest reliability of .86 (Shupack-Neuberg & Nemeroff, in press). The mother section revealed an alpha internal consistency of $\alpha = .88$ and test-retest reliability of .86. In the present study this scale was entitled "Sharing with Different People" to disguise measuring a Merging/Separation construct.

Homophobia. Hansen (1992) developed a fifteen-item Homophobia Scale assessing negative attitudes towards homosexuality. This scale uses a four-point Likert-type rating scale with responses ranging from "strongly agree" to "strongly disagree." The alpha internal consistency reliability coefficient for this scale with a group of undergraduates was $\alpha = .96$ and it correlated $r = .98$ with a 53-item version. This scale was validated by a college population who completed a short-form scale that examined and confirmed research supported relationships about Homophobic persons (Hansen, 1992) (see Appendix C).

AIDS General Knowledge. A forty five-item scale assessing knowledge about AIDS (see Appendix C) was used (Kelly et al., 1989). This scale uses a four-point Likert-type rating scale with responses ranging from "strongly agree" to "strongly disagree." Items administered to undergraduate university students in a study by Kelly et al. (1989) using a dichotomous response version, yielded a K-R 20 reliability coefficient of .74. Test-retest reliability yielded high temporal stability, $r = .84$, measured by scale

administration to college students on occasions separated by two weeks. Construct validity was established by measuring pre- and post-tests of a group of gay men before and after an AIDS intervention program. Factor analyses yielded loadings on one factor which accounted for 85.6% of the variance (Kelly et al., 1989).

AIDS Transmission Knowledge. Participants completed a thirty seven-item scale assessing knowledge of transmission of the specific situations and behaviors in the Contagion items from the Contagion and AIDS Scale (Oizumi & Guarnaccia, 1993). This scale is a seven-point Likert-type rating scale with responses ranging from "strongly agree" to "strongly disagree." This scale was used to discriminate lack of knowledge of AIDS transmission from Contagion effects. Items have a one to one correspondence with the Magical Contagion and AIDS items to assess AIDS transmission more specifically in relationship to Contagion (see Appendix C).

Social Desirability. The fifteen-item Crown-Marlowe Social Desirability Scale (Crown & Marlowe, 1964) was used (see Appendix C). It is in a "true/false" format. This scale was used to assess whether the questionnaire was answered in a manner that suggests a desire for social approval. Items administered to a group of undergraduate university students yielded a K-R 20 reliability coefficient of .88. This scale was correlated with other scales to

measure validity. For a group of undergraduates it was positively correlated with the K and L validity scales on the MMPI (Crown & Marlowe, 1964). In the present study the scale was entitled "What I'm Like."

Procedures

Participants filled out questionnaires for extra credit and were recruited by solicitation in large undergraduate Psychology classes and by using extra-credit research sign up sheets that said they would be answering questions regarding knowledge about HIV/AIDS and comfort in HIV/AIDS situations and would receive extra-credit.

Pilot 1. A pilot study was conducted in conjunction with other research also investigating beliefs and behaviors about sex and AIDS. Two versions of a preliminary Magical Contagion and AIDS Scale was administered to 166 undergraduate students, primarily from General Psychology courses. Order of control items was manipulated by providing subjects with two versions of the Magical Contagion and AIDS Scale (48 total items per version). One version contained the Contagion items with the control items interspersed (each control item directly preceded its corresponding Contagion item) (see Appendix C). The second version contained the Contagion items in one section and the control items in a separate section succeeding the Contagion items. These separate versions were administered to

determine if order of control items affected subjects' responses to the Magical Contagion items.

Pilot 2. In the second pilot study, 40 advanced undergraduates reviewed items from the three a priori factors of Magical Contagion and AIDS: Permanence/Holographic Effects, Moral Germ Conflation, and Backward Action. Items were reviewed to probe for face validity about the construct being measured, to assess Contagion effects, and to determine specific item relevance. In addition, subjects were asked to suggest other questions that seemed relevant, but were not included in this questionnaire (see Appendix D). A qualitative analysis was conducted to improve question clarity and to add relevant items to the questionnaire. All items were retained from the original questionnaire because nothing was consistently reported as unclear by these reviewers. Seventeen Magical Contagion and AIDS and Non-contact items, and sixteen control items were added to the Magical Contagion and AIDS Scale from suggestions made by these advanced undergraduates (see Appendix C).

Main Study. For the main study, the Magical Contagion and AIDS Scale was refined based on qualitative results from data collected in Pilot 2. Two hundred eighty subjects completed questionnaires consisting of the following measures: Magical Contagion and AIDS Scale, Merging/Separation Inventory, Homophobia Scale, AIDS General

Knowledge Scale, AIDS Transmission Knowledge Scale, and Crown-Marlowe Social Desirability Scale (see Appendix C). Titles on some of the scales were changed on the questionnaire to disguise the constructs being measured.

CHAPTER III

RESULTS

Overview of the Data Analyses

Data for the main study were analyzed using correlations, matched-pair t tests, exploratory factor analysis, and means difference t tests. Correlations were used to compare the Magical Contagion and AIDS Scale with the other scales on the questionnaire. Matched-pair t tests were used to compare the Magical Contagion and AIDS Scale to the Non-contact and Control items. Factor analysis was utilized to determine the factor structure of the Magical Contagion and AIDS Scale. Matched-pair t tests were also used to compare the mean levels of Contagion effects between the subscales of the Magical Contagion and AIDS Scale. Means difference t tests were used to determine Contagion effects based on gender and other demographic variables such as race, religiosity and income.

Validity

Content validity was addressed by administering the item pool of the Magical Contagion and AIDS Scale to graduate students in Psychology prior to administration of the questionnaire to undergraduates. Graduate students rated item content by considering item relevance, wording, domain, and addition and deletion of items.

Criterion-related validity was addressed by correlating the Magical Contagion and AIDS Scale with a Merging/Separation Inventory designed to measure desire to merge with or separate from various persons based on direct or indirect contact with them. Merging and separating behaviors addressed in this inventory concern positive people, negative people, and subjects' mothers. These behaviors also involve contact in situations similar to those used to measure Contagion effects (Shupack-Neuberg & Nemeroff, in press). Results revealed that the Magical Contagion and AIDS Scale is significantly correlated with the Merging/Separation Inventory (see Table 1). This correlation provides evidence for criterion-related validity.

Homophobia is assumed to be a concept that is similar to Magical Contagion and AIDS because it elicits attitudes and reactions of individuals that parallel reactions and attitudes to AIDS. It is therefore suggested that scales measuring these two concepts are likely to be correlated. Results indicate that the Magical Contagion and AIDS Scale is significantly correlated with the Homophobia Scale. This correlation provides further evidence for criterion-related validity of the Magical Contagion and AIDS Scale.

Discriminate validity was addressed by comparing scales and including items that differentiate Magical Contagion and AIDS from other factors like homophobia, negative attitudes

towards AIDS infected individuals, proximity to persons with AIDS and general Contagion situations.

If the Magical Contagion and AIDS Scale indicates a different construct than Merging/Separation and Homophobia, it should not correlate at or near unity with these scales after a correction for attenuation due to unreliability (Pedhazur, 1982). These calculations are presented in Table 1. Results revealed that the corrections are small as the alpha internal consistency reliabilities of the Magical Contagion and AIDS Scale, the Merging/Separation Scale, and the Homophobia Scale are high. This finding provides evidence for discriminate validity of the Magical Contagion and AIDS Scale by suggesting that it is a different construct than Merging/Separation and Homophobia.

A General AIDS Knowledge Scale and an AIDS Transmission Knowledge Scale were used to further address discriminate validity. These scales help discriminate AIDS risk situations from other contact or Magical Contagion situations that do not involve risk. If persons lack knowledge of AIDS transmission, reactions to AIDS situations may be a result of fear of contracting AIDS rather than Contagion effects. Results revealed that the Magical Contagion and AIDS Scale was significantly negatively correlated with the AIDS General Knowledge Scale and the AIDS Transmission Knowledge Scale (see Table 1). This finding suggests that there is some overlap between lack of

knowledge about AIDS and Contagion effects in AIDS situations. However, these overlaps only accounts 17% and 16% of the variance, respectively. Therefore, Contagion effects exist beyond persons' lack of knowledge about AIDS and AIDS transmission. This finding provides further support for discriminate validity.

Non-contact items were included for the purpose of establishing discriminate validity. These items are important in discriminating Magical Contagion, which occurs through contact, from non-Contagion, Non-contact situations involving HIV/AIDS infected individuals (see Appendix B). A matched-pair t test for the Magical Contagion and AIDS Scale and the Non-contact items revealed a significant difference between these subscales ($t(263) = 13.60, p < .001$). This provides evidence for discriminate validity by suggesting that contact tends to pose more of a threat in terms of comfort than does Non-contact with AIDS individuals.

Control items were used to assess effects of discomfort related to situations presented in the items, regardless of the presence of an HIV/AIDS infected individuals (see Appendix C). A matched-pair t test revealed a significant difference between Magical Contagion and AIDS items and control items addressing Contagion situations without AIDS ($t(259) = 13.81, p < .001$). In addition, the Magical Contagion and AIDS items and the control items are significantly correlated ($r = .92$). This, in conjunction

with the large mean difference, provides evidence for discriminate validity by suggesting that more than just an uncomfortable situation is required to elicit Contagion effects. Rather, Contagion combined with AIDS infected individuals elicit significantly higher Contagion effects than Contagion in non HIV/AIDS situations.

Matched pair t tests were also conducted for the individual Magical Contagion and AIDS items and their corresponding control items. All control items except 6 Backward Action items (i.e., "You sell your textbooks back to the bookstore and discover that they were bought by someone you know"; "You give your hand-me-downs to a younger cousin"; "You donate money to a civic organization that assists persons in paying their bills"; "You sell your house to someone"; "You donate food to a shelter"; "You donate toys to a hospital and discover they are being used by kids"), and one Non-contact item (i.e., "One of your classmates calls you on the phone to ask you about a class assignment") showed significantly lower levels of Contagion effects than their corresponding Magical Contagion and AIDS items. This suggests that, in general, subjects did not view Backward Action as a threat. However, they did display high Contagion effects for Contagion items on other subscales (Permanence/Holographic Effects, Moral Germ Conflation, and Non-contact) when compared to their matched control items.

A Social Desirability Scale was used to assess effects of responding to questionnaires in a socially desirable manner. The correlation between The Magical Contagion and AIDS Scale and the Social Desirability Scale revealed a small significant negative correlation (see Table 1). This suggests that social desirability has a minor effect on the reporting of Contagion. The Social Desirability Scale was not significantly correlated with the Homophobia Scale, the Merging/Separation Inventory, or the General AIDS Knowledge Scale. This suggests that a need for social approval was not an important factor determining subjects' responses on these scales. In addition, a Homophobia scale was used to examine criterion-related validity. Homophobia suggests some similarities to Magical Contagion and AIDS because attitudes towards AIDS often parallel attitudes towards homosexuals.

Internal Consistency Reliability

Internal consistency reliability was addressed for the Magical Contagion and AIDS Scale. Alpha internal consistency reliability was computed for the Merging/Separation Inventory, Homophobia Scale, AIDS General Knowledge Scale, AIDS Transmission Knowledge Scale, and Social Desirability Scale (see Table 2).

Alpha internal consistency reliabilities were calculated for the Magical Contagion and AIDS Scale (33 items) and for its original 3 subscales

(Permanence/Holographic Effects, 18 items; Moral Germ Conflation, 7 items; Backward Action, 8 items). In addition, alpha internal consistency reliabilities were calculated for a combined scale of Magical Contagion and AIDS items and the 11 Non-contact items (44 items total) (see Table 3). Alpha internal consistencies for the Magical Contagion and AIDS Scale and their subscales are high. This suggests either strong separate factors or a single factor consisting of all subscales. Correlations between the Magical Contagion and AIDS Scale and each of its subscales are high, providing evidence for a single factor (see Table 4).

Exploratory Factor Analysis

A preliminary exploratory factor analysis was conducted on the original 33-item Magical Contagion and AIDS Scale. This factor analysis suggests strong evidence for the existence of a single Contagion and AIDS factor (eigenvalue for single factor = 16.94, 51.3% of variance predicted). Further examination of the scree plot and eigenvalues revealed some support for a three factor model (eigenvalue for factor 2 = 4.17 and eigenvalue for factor 3 = 1.40, 68.2% cumulative variance predicted).

Items on the three factor model suggest different labels than were predicted by theory. These three factors were labeled: Threatening Contact, Non-threatening Contact,

and Backward Action. Items regrouped into these 3 new factors are presented in Appendix B.

Permanence/Holographic Effects items did not elicit a separate factor. The Permanence/Holographic Effects items loaded on two factors that appeared to distinguish items measuring Threatening Contact from Non-threatening Contact. Items on the Threatening Contact factor included situations suggesting the possibility of contact with bodily fluids such as saliva/bodily waste and other potentially dangerous biological contact. Items on the Non-threatening Contact factor included situations involving casual contact like shaking hands and borrowing clothing.

Similarly, the Moral Germ Conflation items did not group as a single factor. If this had occurred, the factor analysis would have revealed a separate factor with only Moral Germ Conflation items, where positive loadings would occur for items 1-4 on the Moral Germ Conflation subscale and negative loadings would occur for items 5-7 on the subscale (see Table 4). Theory would predict this factor structure because items 1-4 suggest victimization by AIDS and items 5-7 indicate culpability in contracting AIDS. Instead, the factor analysis indicated that subjects did not organize Contagion and AIDS on a moral level, rather, Moral Germ Conflation items loaded on the factor containing Non-threatening contact items (see Appendix B, items 12-18). Recoding the Moral Germ Conflation items in Appendix B to

account for the theoretically predicted negative loadings dramatically reduced alpha reliability of this Moral Germ Conflation subscale. Therefore, it appears to be more meaningful to interpret these Moral Germ Conflation items with the other items found on the new, Non-threatening Contact factor.

Three items loaded equally on the Threatening Contact factor and the Non-threatening Contact factor (i.e., "You receive clothing that belonged to a relative who died of HIV/AIDS"; "You are using a pay phone and discover that a person with HIV/AIDS used it just before you"; "A casual acquaintance with HIV/AIDS offers you a jacket while you are waiting at a bus stop on a cold day"). These items were placed on the Non-threatening Contact factor since item content did not suggest threatening contact.

All Backward Action items grouped together on one factor as predicted in the literature. Three items loaded equally on the Backward Action factor and the Non-threatening Contact factor. These items were placed on the Non-threatening Contact factor since item content demonstrated Non-threatening contact rather than any clear Backward Action. These items are: "You are in a class after an exam and are asked to swap exams with the person next to you with HIV/AIDS"; "You are walking in the rain and are offered a ride from a friend with HIV/AIDS"; "You are

asked to assist an emergency worker by covering an AIDS patient with a blanket".

An additional factor analysis was conducted to include combined Magical Contagion items and Non-contact items for a total of 44 items. Again, this analysis strongly suggested the existence of a single Contagion factor (eigenvalue for a single factor = 23.84, 54.2% of variance predicted). Further examination of the scree plot also revealed support for a three factor model (eigenvalue for factor 2 = 4.68, and eigenvalue for factor 3 = 1.56, 68.4% cumulative variance predicted). The items on each of these factors suggest the same labels shown in Appendix B: Threatening Contact, Non-threatening Contact, and Backward Action. All Non-contact items loaded on the Non-threatening Contact factor, further supporting this item grouping and factor label.

Contagion Effects

Mean levels were calculated for the Magical Contagion and AIDS Scale and its three subscales. The mean level of Contagion effects, based on the level of comfort rating was low ($\bar{m} = 2.90$, $sd = 1.17$). The scale consisted of the following levels of comfort: 1 = "Extremely comfortable, 2 = "Comfortable, 3 = "Somewhat comfortable", 4 = "Neither comfortable nor uncomfortable", 5 = "Somewhat uncomfortable", 6 = "Uncomfortable", and 7 = "Extremely uncomfortable", therefore, 2.9 overall is low. Only a small

number of participants appeared to report high levels of Contagion effects (demonstrated by sorting and comparing individual subject's mean levels of Contagion on these scales). This small number of participants appeared to be high on the subscales of the Magical Contagion and AIDS Scale, but the findings were not consistent. Also, Contagion effects did not differ based on gender, age, income, religion or race.

Mean levels were calculated for Non-contact items. Results revealed some Contagion effects for Non-contact items ($\bar{m} = 2.49$, $sd = 1.28$). This suggests that mere proximity to AIDS infected individuals, such as being in the same room or building, elicits Contagion for a minority of individuals.

Mean levels of Contagion and AIDS revealed that Contagion effects for items on the Threatening factor were significantly higher than those on the Non-threatening factor ($\bar{m} = 4.30$ and 2.90 respectively, $t(269) = 22.06$, $p < .001$). In addition, items on the Non-threatening factor reveal significantly higher Contagion effects than those on the Non-contact factor ($\bar{m} = 2.90$ and 2.50 respectively, $t(264) = 11.38$, $p < .001$). It also provides additional evidence for the existence of Contagion effects on a single continuum where more threatening contact elicits higher Contagion effects and less threatening contact elicits lower Contagion effects.

CHAPTER IV

DISCUSSION

This study developed a theoretically and empirically driven Magical Contagion and AIDS Scale. The scale contains items covering each of the features of Contagion as defined in the literature. To further the external validity of this measure, the scale integrated a variety of items addressing several AIDS situations that are likely to occur in everyday, interpersonal interactions. The scale is an improvement over prior Magical Contagion and AIDS scales because it is driven by both theory and empirical data.

Correlations indicate that the Magical Contagion and AIDS Scale was highly correlated with the Merging/Separation Inventory. This finding provides evidence for criterion-related validity of the Magical Contagion and AIDS Scale. This finding was predicted because the described situations in these two measures are similar. Both scales use situations that measure desire or level of comfort to merge with or separate from various persons on a physical level and they both measure similar types of contact with those persons.

The Magical Contagion and AIDS Scale was also highly correlated with the Homophobia Scale. This also provides evidence for criterion-related validity of the Magical

Contagion and AIDS Scale. This finding was predicted because Homophobic attitudes are parallel to Magical Contagion and AIDS attitudes.

Correlations between the Magical Contagion and AIDS Scale and the knowledge scales (AIDS General Knowledge and AIDS Transmission Knowledge) revealed significant negative correlations (see Table 1). This suggests that as Contagion effects increase, knowledge about AIDS decreases. Therefore, there is some overlap between lack of knowledge about AIDS and Contagion effects. However, there does appear to be some existence of Contagion effects when knowledge about AIDS is high suggesting that Contagion may be a construct that is irrational in nature because persons experience discomfort in situations where they know they are not in danger of contracting AIDS.

Literature asserts that Magical Contagion is an influence or essence that is transmitted through direct or indirect contact that remains after contact is terminated (Nemeroff et al., 1990; 1992). Non-contact items were included in the Magical Contagion and AIDS Scale to discriminate theoretically based Contagion items from other AIDS situations. It was predicted that Contagion items would be endorsed and Non-contact items would not be endorsed. Although data analyses revealed that mean levels for Non-contact items were significantly lower than those for Contagion items, the mean difference was small (.40 on a

7 point scale) suggesting that proximity to AIDS individuals, devoid of direct or indirect contact, elicits some Contagion effects.

The factor structure of the Magical Contagion and AIDS Scale is different than this anthropological theory predicts. The factor analysis revealed one strong factor which suggests that all Contagion items measure the concept in a similar fashion. Thus, different features of Magical Contagion and AIDS may not be distinguishable. Rather, Magical Contagion and AIDS is a single, general concept that is measured through a variety of items.

However, the factor analysis also revealed evidence for a three factor model. Factors in this model are not divided according to theory, with the exception of Backward Action. The factor analysis suggested a different, but also meaningful, factor structure which includes a Threatening Contact factor, A Non-Threatening Contact factor, and a Backward Action factor. As mentioned above, the Threatening Contact factor includes items with AIDS individuals where the presence of possibly infected bodily fluids is suggested. The Non-threatening factor includes items with situations where contact with AIDS individuals is more casual, such as: hand shaking, borrowing clothing, or contacting various benign objects belonging to those individuals. The Backward Action factor contains items

originally predicted to measure transmission of essence from recipient to source rather than source to recipient.

This empirically driven factor structure suggests that Magical Contagion and AIDS may be more accurately defined as a continuum of Contagion effects rather than as distinct aspects of Contagion. The continuum may range from Threatening Contact to Non-threatening Contact to Non-contact to Backward Action. Items used to measure the construct of Magical Contagion and AIDS generally represent two separate aspects of Contagion. These aspects are either Threatening Contact or Non-threatening Contact and Non-contact. Therefore, the separation of Contagion into two aspects, rather than modeling Contagion on a continuum, may be increased by the somewhat extreme set of items used to measure the construct. Also, using a varimax rotation to assess the factor structure of the Magical Contagion and AIDS scale tends to further separate factors for the purpose of analyses. Finally, the factor analysis indicated evidence for one strong factor on the Magical Contagion and AIDS Scale. The above findings serve as support for a continuum of Contagion effects or a single, continuous degree of threat for the minority of individuals who display Contagion effects.

Mean levels for the new factors significantly decrease as the factor becomes less threatening. For example, mean levels of Contagion effects for the Threatening factor were

significantly higher than mean levels of Contagion effects for the Non-threatening factor. Further, mean levels of Contagion effects for the Non-threatening factor were significantly higher than mean levels for the Non-contact factor. Finally, mean levels for the Non-contact factor were significantly higher than mean levels for the Backward Action factor. This finding further supports Magical Contagion and AIDS as a construct existing on a continuum where more threatening contact elicits higher levels of Contagion than Non-threatening contact, and Non-threatening Contact elicits higher levels of Contagion than Non-contact.

Two plausible definitions of Magical Contagion and AIDS may exist based on the above findings. Because a small number of subjects displayed Contagion effects fairly consistently for the overall Magical Contagion and AIDS Scale and the separate subscales (with the exception of Backward Action), Magical Contagion and AIDS may be an irrational discomfort experienced by those individuals. The discomfort would be elicited by the presence of an essence, transmitted directly or indirectly, which continues to exist after contact has terminated and is more than a fear of contracting AIDS.

This definition, found in past literature suggests that, for a small number of people, Magical Contagion may serve as an explanation for persons' overreaction to AIDS risk situations. Magical Contagion, in theory, suggests

that an essence is transmitted from a person infected with AIDS to another individual and remains after contact has terminated. Contagion is said to be of an irrational nature since the essence does not serve as a plausible means of AIDS transmission. Therefore, when persons endorse Contagion effects, they are reacting to AIDS situations in an irrational fashion that may result in overreaction to AIDS. For example, persons displaying an overreaction to non-risk AIDS situations might discriminate against individuals with AIDS by banning them from attending school.

An irrational overreaction to AIDS non-risk situations may be important in predicting preventive health behaviors. Persons displaying an overreaction may have a strong intention to use preventive health behaviors because these persons are likely to be overly cautious in AIDS risk situations, much like the worried well. Therefore, an understanding of Magical Contagion and AIDS and its relation to persons' reactions and behaviors is important, at least for the minority of persons who display Contagion effects.

The literature also mentions that underreaction to AIDS risk situations may be explained by the construct of Magical Contagion. Underreaction was not supported in this study because the Moral Germ Conflation subscale was not a separate factor when subjected to empirical analyses. Magical Contagion as an explanation for persons underreaction to AIDS risk situations may have been

supported if subjects had displayed higher Contagion effects for morally bad items (i.e., "You shake hands with a gay male who contracted HIV/AIDS through unprotected sex"; "You shake hands with a criminal who has HIV/AIDS"; "You shake hands with an AIDS patient who is an IV drug user") and lower Contagion effects for morally good items (i.e., "You shake hands with an AIDS patient who contracted AIDS after receiving a blood transfusion"; "You shake hands with a physician who contracted HIV/AIDS through accidental blood contact with a patient"; "You shake hands with a priest/minister who has HIV/AIDS"; "You hug a child who contracted HIV/AIDS from his/her mother"). If this had been found, it would have suggested that persons who are morally good are not as contagious as persons who are morally bad.

A second plausible way to define Magical Contagion and AIDS based on the above findings is that only those very few individuals who displayed high Contagion effects for Backward Action items, as well as for the other subscales of the Magical Contagion and AIDS Scale, truly experience Magical Contagion and AIDS as defined in the literature. Instead, persons displaying Contagion effects for all factors except Backward Action may be experiencing a degree of threat or perceived harm that is associated with the situations in the Magical Contagion items rather than an irrational reaction. For example, items with Threatening contact may elicit a stronger degree of threat or fear than

Non-threatening items. Non-threatening items may suggest something similar to germ theory where subjects perceive germs remaining on objects touched by AIDS individuals. Finally, Non-contact items may still only elicit a small degree of threat, but mere proximity may cause a fearful and uncomfortable reaction. Persons may also be using the heuristic of "Better safe than sorry" such that they are overly cautious even in non-risk situations so that they are assured that they will not contract AIDS.

This newly developed Magical Contagion and AIDS Scale may be a useful tool for measuring the Magical Contagion and AIDS construct or for examining the degree of AIDS threat. Whatever the case, the instrument appears to be a useful measure of persons' overreaction to non-risk AIDS situations. The construct of Magical Contagion and AIDS may be useful in attempts to reduce prejudice and discrimination towards persons with AIDS. This construct provides evidence for irrational beliefs and/or behaviors about non-risk situations for a minority of people. If those persons' beliefs and behaviors can be conveyed as irrational, there may be an overall reduction in prejudice and discrimination because there would no longer be a foundation for those beliefs and behaviors.

The construct of Magical Contagion and AIDS may be useful in the prediction of the use of preventive health behaviors in conjunction with other constructs that predict

preventive health behaviors (mentioned above). It may, therefore, be important to consider when designing educational programs or interventions that attempt to encourage people to use preventive measures, especially in situations involving AIDS infected individuals.

Limitations and Future Directions

The use of a college population decreases the likelihood of finding Contagion effects as college students may have more access to accurate health care information. The minority of individuals displaying Contagion effects could not be isolated in terms of common demographic factors. In addition, anthropological evidence suggests that Magical Contagion originated in more traditional, less technically focused cultures (Nemeroff et al., 1992) and therefore, may have a stronger influence in that context. Magical Contagion and AIDS would likely co-vary with education, such that amount of education may influence how much Contagion effects people display. This was not examined because level of education does not differ significantly between participants in this study because they are all college students.

Future studies should address Magical Contagion and AIDS in detail in an attempt to isolate and understand the minority of subjects who display Contagion effects. The sampled population should consist of persons from diverse groups in terms of age, race, religion, education, and

income so that these variables can be examined and their role in eliciting Contagion effects can be explored. A population other than college students should be utilized to determine amount of Contagion effects for persons who may not have access to AIDS information and who may not be as sensitized to the presence of AIDS.

As mentioned above, it is difficult to distinguish a Magical Contagion and AIDS construct from other factors like homophobia, homosexism, and negative prejudicial attitudes towards persons with HIV/AIDS and fear of infection. Distinctions among these scales need to be further studied. Studies should also incorporate other predictors of preventive health behaviors such as Knowledge, the Health Belief Model, and Germ Theory.

Table 1

Correlations for all scales

| | Magical Contagion | Magical Contagion 2 | Homophobia | Homophobia (correction) | AIDS General Knowledge | Merging/Sep. (correction) | AIDS Trans. Knowledge |
|------------------------------|----------------------|------------------------|------------|----------------------------|---------------------------|------------------------------|--------------------------|
| Magical Contagion | | | | | | | |
| Magical Contagion 2 | .9944** | | | | | | |
| Homophobia | .5617** | .5502** | | | | | |
| Homophobia (correction) | .5882 | .5731 | | | | | |
| AIDS General Knowledge | -.4099** | -.4151** | -.3020** | -.3595 | | | |
| Merging/Sep. | .4329** | .4306** | .3414** | .3670 | -.2011** | | |
| Merging/Sep. (correction) | .4727 | .4532 | .3670 | -.2394 | | | |
| AIDS Trans. Knowledge | -.3782** | -.3719** | -.3063** | -.3403 | .3393** | -.0495 | -.1103 |
| Social Desirability | -.1721** | -.1735** | -.0636 | -.0854 | .0016 | -.1988** | -.0219 |

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed)

Table 2

Alpha Reliability for Scales other than Magical Contagion and AIDS

| Scale | Merging/Separation | Homophobia | AIDS General Knowledge | AIDS Trans. Knowledge | Social Desirability |
|-----------------------|--------------------|------------|------------------------|-----------------------|---------------------|
| Number of items | 43 | 15 | 45 | 37 | 15 |
| Standard item alpha | .92 | .94 | .76 | .98 | .59 |
| Avg. inter-item corr. | .21 | .51 | .07 | .57 | .09 |

Table 3
Alpha Reliability for Magical Contagion and AIDS Scales

| Scale | Magical Contagion ¹ (Scale 1) | Magical Contagion ² (Scale 2) | Permanence/ Holographic Action | Backward Conflation | Moral Germ Conflation | Non-contact Items |
|-----------------------|---------------------------------------------|---------------------------------------------|--------------------------------------|------------------------|--------------------------|----------------------|
| Number of items | 33 | 44 | 18 | 8 | 7 | 11 |
| Standard item alpha | .97 | .98 | .96 | .93 | .94 | .96 |
| Avg. inter-item corr. | .50 | .53 | .57 | .62 | .69 | .66 |

¹Magical Contagion (Scale 1) contains: Permanence/Holographic Effects items, Moral Germ Conflation items, and Backward Action items

²Magical Contagion (Scale 2) contains: Magical Contagion (Scale 1) items and Non-contact items

Table 4

Correlations for Magical Contagion and AIDS Subscales

| | Magical Contagion ¹ | Magical Contagion ² | Permanence/Holographic | Backward Action | Moral Germ Conflation |
|--------------------------------|--------------------------------|--------------------------------|------------------------|-----------------|-----------------------|
| Magical Contagion ¹ | | | | | |
| Magical Contagion ² | .9944** | | | | |
| Permanence/Holographic | .9712** | .9564** | | | |
| Backward Action | .6769** | .7009** | .5224** | | |
| Moral Germ Conflation | .9305** | .9256** | .8810** | .5316** | |
| Non-Contact Items | .9198** | .9562** | .8586** | .7265** | .8581** |

APPENDIX A
INFORMED CONSENT

Study of Beliefs about AIDS

This study tries to understand beliefs of college men and women regarding HIV/AIDS. Participation for this study is voluntary. If you choose not to participate in this study, please return the questionnaire. You have the right to withdraw from this study at any time without penalty.

If you choose to participate, fill out this questionnaire packet. It is very important that you answer all items honestly. There are no "right" or "wrong" answers. Your beliefs are the correct answers. These questionnaires are anonymous so your answers will not be linked to you.

Men and women will receive 1 hour (2 points) for this experiment. Once again, YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL AND WILL NOT BE LINKED TO YOU. PLEASE DO NOT PUT YOUR NAME OR ID ANYWHERE ON THE QUESTIONNAIRE.

If you have any questions or problems that arise in connection with your participation in this study, you should discuss it with the individuals giving these questionnaires. The researcher for this study is a graduate student, Joelle Oizumi, in the Department of Psychology who is working under the project director, Dr. Charles Guarnaccia. Either person can be contacted in the Department of Psychology of the University of North Texas, at 817-565-2671.

APPENDIX B
MAGICAL CONTAGION AND AIDS SCALE ITEMS

Permanence/Holographic Effects Items

1. A casual acquaintance with HIV/AIDS offers you a jacket while you are waiting at a bus stop on a cold day.
2. You are walking in the rain and are offered a ride from a friend with HIV/AIDS.
3. You casually shake hands with someone you are being introduced to with HIV/AIDS.
4. You are asked to assist an emergency worker by covering a patient with HIV/AIDS with a blanket.
5. You are using a water fountain and discover that a person with HIV/AIDS used it just before you.
6. You are out to dinner with a friend with HIV/AIDS who offers you a bite of his/her dinner.
7. You are in a class after an exam and are asked to swap exams with the person next to you with HIV/AIDS.
8. One of your classmates with HIV/AIDS asks to borrow your class notes.
9. You are at a Mexican restaurant with a friend with HIV/AIDS and you are sharing the chips and dip.
10. You are at a party and accidentally drink from a beer that belongs to someone with HIV/AIDS.
11. You receive clothing that belonged to a relative who died of HIV/AIDS.
12. A friend with HIV/AIDS offers to cook dinner for you.
13. You use a stall in a bathroom that has just been used by someone you know with HIV/AIDS.
14. You are using a pay phone and discover that a person with HIV/AIDS used it just before you.
15. You are sitting in a booth in a restaurant and discover that a person with HIV/AIDS sat there just before you.
16. You buy a car from a private owner who has HIV/AIDS.
17. You buy a sweater that has just been tried-on by someone with HIV/AIDS.
18. You are assigned a new dorm mate with HIV/AIDS.

Moral Germ Conflation Items

1. You hug a child who contracted HIV/AIDS from his/her mother.
2. You shake hands with an AIDS patient who contracted AIDS after receiving a blood transfusion.
3. You shake hands with a priest/minister who has HIV/AIDS.
4. You shake hands with a physician who contracted HIV/AIDS through accidental blood contact with a patient.
5. You shake hands with a criminal who has HIV/AIDS.
6. You shake hands with an AIDS patient who is an IV drug user.
7. You shake hands with a gay male who contracted HIV/AIDS through unprotected sex.

Backward Action Items

1. You donate food to a shelter for persons with HIV/AIDS.
2. You donate toys to a hospital and discover they are being used by kids with HIV/AIDS.
3. You sell your house to someone with HIV/AIDS.
4. You donate money to a civic organization that assists persons with HIV/AIDS in paying their bills.
5. You donate blood and find out it has been used by a recipient you do not know with HIV/AIDS.
6. You donate clothing to the Salvation Army and discover that it has been given to someone with HIV/AIDS.
7. You sell your textbooks back to the bookstore and discover that they were bought by someone you know with HIV/AIDS.
8. You give your hand-me-downs to a younger cousin with HIV/AIDS.

Non-contact Items

1. You are sitting in a room by yourself and a stranger with HIV/AIDS walks in.
2. You go to visit someone who is in the hospital on the HIV/AIDS ward.
3. You meet one of your friends who has HIV/AIDS for lunch.
4. You are in a class setting with a classmate with has HIV/AIDS.
5. One of your classmates with HIV/AIDS calls you on the phone to ask you about a class assignment.
6. You are asked to do a class project with two other class members, one of whom has HIV/AIDS.
7. You are in a movie theater and the person behind you mentions to their friend that they have HIV/AIDS.
8. You are a teacher's assistant and someone with HIV/AIDS is assigned an office cubicle next to yours.
9. You are in line in the cafeteria behind someone with HIV/AIDS.
10. You are traveling on a plane and find out that you are seated next to someone with HIV/AIDS.
11. You are studying in the library and someone with HIV/AIDS sits next to you.

Non-threatening Contact Items (First Factor)

1. A casual acquaintance with HIV/AIDS offers you a jacket while you are waiting at a bus stop on a cold day.
2. You are walking in the rain and are offered a ride from a friend with HIV/AIDS.
3. You casually shake hands with someone you are being introduced to with HIV/AIDS.
4. You are asked to assist an emergency worker by covering a patient with HIV/AIDS with a blanket.
5. You are in a class after an exam and are asked to swap exams with the person next to you with HIV/AIDS.
6. One of your classmates with HIV/AIDS asks to borrow your class notes.
7. You receive clothing that belonged to a relative who died of HIV/AIDS.
8. You are sitting in a booth in a restaurant and discover that a person with HIV/AIDS sat there just before you.
9. You buy a car from a private owner who has HIV/AIDS.
10. You buy a sweater that has just been tried-on by someone with HIV/AIDS.
11. You are using a pay phone and discover that a person with HIV/AIDS used it just before you.
12. You hug a child who contracted HIV/AIDS from his/her mother.
13. You shake hands with an AIDS patient who contracted AIDS after receiving a blood transfusion.
14. You shake hands with a priest/minister who has HIV/AIDS.
15. You shake hands with a physician who contracted HIV/AIDS through accidental blood contact with a patient.
16. You shake hands with a criminal who has HIV/AIDS.
17. You shake hands with an AIDS patient who is an IV drug user.
18. You shake hands with a gay male who contracted HIV/AIDS through unprotected sex.

Threatening Contact Items (Second Factor)

1. You are at a Mexican restaurant with a friend with HIV/AIDS and you are sharing the chips and dip.
2. You are at a party and accidentally drink from a beer that belongs to someone with HIV/AIDS.
3. You are assigned a new dorm mate with HIV/AIDS.
4. You are using a water fountain and discover that a person with HIV/AIDS used it just before you.
5. You are out to dinner with a friend with HIV/AIDS who offers you a bite of his/her dinner.
6. A friend with HIV/AIDS offers to cook dinner for you.
7. You use a stall in a bathroom that has just been used by someone you know with HIV/AIDS.

Backward Action Items (Third Factor)

1. You donate food to a shelter for persons with HIV/AIDS.
2. You donate toys to a hospital and discover they are being used by kids with HIV/AIDS.
3. You sell your house to someone with HIV/AIDS.
4. You donate money to a civic organization that assists persons with HIV/AIDS in paying their bills.
5. You donate blood and find out it has been used by a recipient you do not know with HIV/AIDS.
6. You donate clothing to the Salvation Army and discover that it has been given to someone with HIV/AIDS.
7. You sell your textbooks back to the bookstore and discover that they were bought by someone you know with HIV/AIDS.
8. You give your hand-me-downs to a younger cousin with HIV/AIDS.

APPENDIX C
MAIN STUDY QUESTIONNAIRE

Your Personal Data

The questions on this page ask about who you are. Please fill in the blank or circle the ONE answer which best describes you. Please do not skip any items.

What is your age? _____ (years) What is your gender? (Circle) 1=Male 2=Female
 What is your current marital status? (Circle) 1=Single 2=Married 3=Divorced 4=Separated
 What is your class standing? (Circle) 1=Freshman 2=Sophomore 3=Junior 4=Senior 5=Other
 Do you currently have a bachelors degree? (Circle) 1=Yes 2=No
 What is your mother's highest level of education? (Circle)
 1=Grade School 2=Some High School 3=High School/GED Diploma 4=Some College/Trade School
 5=Four Year College Degree 6=Some Graduate Courses 7=Graduate Degree

What is your father's highest level of education? (Circle)
 1=Grade School 2=Some High School 3=High School/GED Diploma 4=Some College/Trade School
 5=Four Year College Degree 6=Some Graduate Courses 7=Graduate Degree

What is your racial/ethnic background? (Circle)
 1=Caucasian (White) 2=African-American (Black) 3=Hispanic American 4=Asian American 5=Native American 6=Other

What is your yearly personal income? The money that you earn yourself or college loans that you yourself take out, not money from your family (Circle)
 1=\$0-\$9,999 2=\$10,000-\$19,999 3=\$20,000-\$29,999 4=\$30,000-\$39,999 5=\$40,000+

What is your yearly family income? The combined income of you and your spouse (if you are married) or your partner. Or the income of your parents if they support you. If unsure, please estimate. (Circle)
 1=\$0-\$9,999 2=\$10,000-\$19,999 3=\$20,000-\$29,999 4=\$30,000-\$39,999
 5=\$40,000-\$49,999 6=\$50,000-\$59,999 7=\$60,000-\$79,999 8=\$80,000 or more

Do you consider yourself religious? (Circle)
 1=Yes, definitely religious 2=Agnostic or unsure 3=No, definitely not religious

How often do you attend religious services? (Circle)
 1=More than twice a week 2=1-2 times a week 3=Occasionally 4=Never

=====
 Your Comfort in HIV/AIDS Situations

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Comfortable", "Comfortable", "Somewhat Comfortable", "Neither Comfortable nor Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", or "Extremely Uncomfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | | | | | | |
|-----------------------|-------------|----------------------|---------------------------------------|------------------------|---------------|-------------------------|
| Extremely comfortable | Comfortable | Somewhat comfortable | Neither comfortable nor uncomfortable | Somewhat uncomfortable | Uncomfortable | Extremely uncomfortable |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- _____ 1. A casual acquaintance with HIV/AIDS offers you a jacket while you are waiting at a bus stop on a cold day.
- _____ 2. You are walking in the rain and are offered a ride from a friend with HIV/AIDS.
- _____ 3. You are sitting in a room by yourself and a stranger with HIV/AIDS walks in.
- _____ 4. You donate blood and find out it has been used by a recipient you do not know with HIV/AIDS.
- _____ 5. You casually shake hands with someone you are being introduced to with HIV/AIDS.
- _____ 6. You are asked to assist an emergency worker by covering a patient with a blanket.
- _____ 7. You are using a water fountain and discover that a person with HIV/AIDS used it just before you.
- _____ 8. You go to visit someone who is in the hospital on the HIV/AIDS ward.

- | Extremely
comfortable | Comfortable | Somewhat
comfortable | Neither comfortable
nor uncomfortable | Somewhat
uncomfortable | Uncomfortable | Extremely
uncomfortable |
|--------------------------|-------------|-------------------------|------------------------------------------|---------------------------|---------------|----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- ___ 9. You donate clothing to the Salvation Army and discover that it has been given to someone with HIV/AIDS.
 - ___ 10. You shake hands with an AIDS patient who contracted AIDS after receiving a blood transfusion.
 - ___ 11. You are out to dinner with a friend with HIV/AIDS who offers you a bite of his/her dinner.
 - ___ 12. You are in a class after an exam and are asked to swap exams with the person next to you with HIV/AIDS.
 - ___ 13. You meet one of your friends who has HIV/AIDS for lunch.
 - ___ 14. One of your classmates with HIV/AIDS asks to borrow your class notes.
 - ___ 15. You shake hands with a gay male who contracted HIV/AIDS through unprotected sex.
 - ___ 16. You are at a Mexican restaurant with a friend with HIV/AIDS and you are sharing the chips and dip.
 - ___ 17. You are at a party and accidentally drink from a beer that belongs to someone with HIV/AIDS.
 - ___ 18. You are in a class setting with a classmate with has HIV/AIDS.
 - ___ 19. You sell your textbooks back to the bookstore and discover that they were bought by someone you know with HIV/AIDS.
 - ___ 20. You shake hands with a physician who contracted HIV/AIDS through accidental blood contact with a patient.
 - ___ 21. You receive clothing that belonged to a relative who died of HIV/AIDS.
 - ___ 22. A friend with HIV/AIDS offers to cook dinner for you.
 - ___ 23. One of your classmates with HIV/AIDS calls you on the phone to ask you about a class assignment.
 - ___ 24. You give your hand-me-downs to a younger cousin with HIV/AIDS.
 - ___ 25. You shake hands with a priest/minister who has HIV/AIDS.
 - ___ 26. You use a stall in a bathroom that has just been used by someone you know with HIV/AIDS.
 - ___ 27. You are using a pay phone and discover that a person with HIV/AIDS used it just before you.
 - ___ 28. You are asked to do a class project with two other class members, one of whom has HIV/AIDS.
 - ___ 29. You donate money to a civic organization that assists persons with HIV/AIDS in paying their bills.
 - ___ 30. You shake hands with a criminal who has HIV/AIDS.
 - ___ 31. You are sitting in a booth in a restaurant and discover that a person with HIV/AIDS sat there just before you.
 - ___ 32. You buy a car from a private owner who has HIV/AIDS.
 - ___ 33. You are in a movie theater and the person behind you mentions to their friend that they have HIV/AIDS.
 - ___ 34. You sell your house to someone with HIV/AIDS.
 - ___ 35. You hug a child who contracted HIV/AIDS from his/her mother.
 - ___ 36. You buy a sweater that has just been tried-on by someone with HIV/AIDS.
 - ___ 37. You are assigned a new dorm mate with HIV/AIDS.
 - ___ 38. You are a teacher's assistant and someone with HIV/AIDS is assigned an office cubicle next to yours.
 - ___ 39. You donate food to a shelter for persons with HIV/AIDS.
 - ___ 40. You shake hands with an AIDS patient who is an IV drug user.
 - ___ 41. You are in line in the cafeteria behind someone with HIV/AIDS.

| | | | | | | |
|--------------------------|-------------|-------------------------|------------------------------------------|---------------------------|---------------|----------------------------|
| Extremely comfortable | Comfortable | Somewhat comfortable | Neither comfortable nor uncomfortable | Somewhat uncomfortable | Uncomfortable | Extremely uncomfortable |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- ___ 42. You are traveling on a plane and find out that you are seated next to someone with HIV/AIDS.
- ___ 43. You are studying in the library and someone with HIV/AIDS sits next to you.
- ___ 44. You donate toys to a hospital and discover they are being used by kids with HIV/AIDS.

=====

Your Comfort in Situations

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Comfortable", "Comfortable", "Somewhat Comfortable", "Neither Comfortable nor Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", or "Extremely Uncomfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | | | | | | |
|--------------------------|-------------|-------------------------|------------------------------------------|---------------------------|---------------|----------------------------|
| Extremely comfortable | Comfortable | Somewhat comfortable | Neither comfortable nor uncomfortable | Somewhat uncomfortable | Uncomfortable | Extremely uncomfortable |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- ___ 45. A casual acquaintance offers you a jacket while you are waiting at a bus stop on a cold day.
- ___ 46. You are walking in the rain and are offered a ride from a friend.
- ___ 47. You are sitting in a room by yourself and a stranger walks in.
- ___ 48. You donate blood and find out it has been used by a recipient you do not know.
- ___ 49. You casually shake hands with someone you are being introduced to.
- ___ 50. You are asked to assist an emergency worker by covering a patient with a blanket.
- ___ 51. You are using a water fountain and discover that a person used it just before you.
- ___ 52. You go to visit someone who is in the hospital.
- ___ 53. You donate clothing to the Salvation Army and discover that it has been given to someone.
- ___ 54. You are out to dinner with a friend who offers you a bite of his/her dinner.
- ___ 55. You are in a class after an exam and are asked to swap exams with the person next to you.
- ___ 56. You meet one of your friends for lunch.
- ___ 57. One of your classmates asks to borrow your class notes.
- ___ 58. You are at a Mexican restaurant with a friend and you are sharing the chips and dip.
- ___ 59. You are at a party and accidentally drink from a beer that belongs to someone else.
- ___ 60. You are in a class setting with a classmate.
- ___ 61. You sell your textbooks back to the bookstore and discover that they were bought by someone you know.
- ___ 62. You receive clothing that belonged to relative who died.
- ___ 63. A friend offers to cook dinner for you.
- ___ 64. One of your classmates calls you on the phone to ask you about a class assignment.
- ___ 65. You give your hand-me-downs to a younger cousin.
- ___ 66. You use a stall in a bathroom that has just been used by someone you know.
- ___ 67. You are using a pay phone and discover that someone used it just before you.
- ___ 68. You are asked to do a class project with two other class members.
- ___ 69. You donate money to a civic organization that assists persons in paying their bills.
- ___ 70. You are sitting in a booth in a restaurant and discover that a person sat there just before you.
- ___ 71. You buy a car from a private owner.
- ___ 72. You are in a movie theater and there are persons sitting behind you.

| | | | | | | |
|--------------------------|-------------|-------------------------|------------------------------------------|---------------------------|---------------|----------------------------|
| Extremely comfortable | Comfortable | Somewhat comfortable | Neither comfortable nor uncomfortable | Somewhat uncomfortable | Uncomfortable | Extremely uncomfortable |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- ___ 73. You sell your house to someone you know.
- ___ 74. You buy a sweater that has just been tried-on by someone.
- ___ 75. You are assigned a new dorm mate.
- ___ 76. You are a teacher's assistant and someone is assigned an office cubicle next to yours.
- ___ 77. You donate food to a shelter.
- ___ 78. You are in line in the cafeteria behind someone.
- ___ 79. You are traveling on a plane and find out that you are seated next to someone.
- ___ 80. You are studying in the library and someone you know sits next to you.
- ___ 81. You donate toys to a hospital and discover they are being used by kids.

=====

Sharing with Different People

Please use this scale to answer the following questions, by circling the corresponding number: If you do not have a boyfriend, girlfriend, or spouse, please imagine a typical partner for yourself.

RATE HOW YOU WOULD FEEL ABOUT WEARING EACH OF THE FOLLOWING:

1.....2.....3.....4.....5.....6.....7.....8.....9
 extremely neutral extremely
 bad good

- ___ 1. A new sweater, of an attractive, unisex style.
- ___ 2. An identical sweater that belongs to and has been worn by your mother.
- ___ 3. An identical sweater that belongs to and has been worn by your best friend of the same sex.
- ___ 4. An identical sweater that belongs to and has been worn by your boyfriend/girlfriend/spouse.
- ___ 5. An identical sweater that belongs to and has been worn by a smelly, unwashed, scruffy-looking stranger.
- ___ 6. An identical sweater that belongs to and has been worn by the person you dislike the most from your peer group.
- ___ 7. An identical sweater that belongs to and has been worn by the authority figure that you most resent and despise.
- ___ 8. An identical sweater that belongs to and has been worn by the person you admire and respect most in the world.

RATE HOW YOU WOULD FEEL ABOUT EACH OF THE FOLLOWING PEOPLE BORROWING AND WEARING YOUR SWEATER, WITH YOUR PERMISSION.

- ___ 9. Your mother.
- ___ 10. Your best friend of the same sex.
- ___ 11. Your boyfriend/girlfriend/spouse.
- ___ 12. A smelly unwashed, scruffy-looking stranger.
- ___ 13. The person you dislike the most from your peer group.
- ___ 14. The authority figure that you most resent and despise.
- ___ 15. The person you admire and respect most in the world.

RATE HOW YOU WOULD FEEL ABOUT EATING OFF THE FOLLOWING PEOPLES' PLATES AT A RESTAURANT (ONE TASTE OF THEIR DISH AFTER THEY HAVE EATEN SOME AND TELL YOU IT'S GOOD):

- ___ 16. Your mother.
- ___ 17. Your best friend of the same sex.
- ___ 18. Your boyfriend/girlfriend/spouse.
- ___ 19. A smelly unwashed, scruffy-looking stranger.
- ___ 20. The person you dislike the most from your peer group.

1.....2.....3.....4.....5.....6.....7.....8.....9
 extremely neutral extremely
 bad good

___ 21. The authority figure that you most resent and despise.
 ___ 22. The person you admire and respect most in the world.
 RATE HOW YOU FEEL ABOUT THE FOLLOWING PEOPLE EATING OFF YOUR PLATE IN A RESTAURANT (ONE TASTE AFTER YOU EAT SOME AND YOU COMMENT THAT IT'S GOOD):

- ___ 23. Your mother.
- ___ 24. Your best friend of the same sex.
- ___ 25. Your boyfriend/girlfriend/spouse.
- ___ 26. A smelly unwashed, scruffy-looking stranger.
- ___ 27. The person you dislike the most from your peer group.
- ___ 28. The authority figure that you most resent and despise.
- ___ 29. The person you admire and respect most in the world.

RATE HOW YOU WOULD FEEL ABOUT EACH OF THE FOLLOWING PEOPLE BRUSHING UP AGAINST YOU WHILE STANDING BEHIND YOU IN THE CHECKOUT LINE AT A STORE:

- ___ 30. Your mother.
- ___ 31. Your best friend of the same sex.
- ___ 32. Your boyfriend/girlfriend/spouse.
- ___ 33. A smelly unwashed, scruffy-looking stranger.
- ___ 34. The person you dislike the most from your peer group.
- ___ 35. The authority figure that you most resent and despise.
- ___ 36. The person you admire and respect most in the world.

RATE HOW YOU WOULD FEEL ABOUT THE FOLLOWING PEOPLE GIVING YOU A BIG HUG AT MIDNIGHT ON NEW YEAR'S EVE.

- ___ 37. Your mother.
- ___ 38. Your best friend of the same sex.
- ___ 39. Your boyfriend/girlfriend/spouse.
- ___ 40. A smelly unwashed, scruffy-looking stranger.
- ___ 41. The person you dislike the most from your peer group.
- ___ 42. The authority figure that you most resent and despise.
- ___ 43. The person you admire and respect most in the world.

=====
 People who are Homosexual

These questions concern your beliefs about people who are homosexual. Circle the one number that corresponds to your level of agreement, whether you "Strongly Agree", "Agree", "Partially Agree", "Neither Agree nor Disagree", "Partially Disagree", "Disagree", or "Strongly Disagree". Please do not skip any items even if they do not apply to you.

| | | | | | | | |
|----------|-------|-----------|---------|----------|-----------|----------|----------|
| Strongly | Agree | Partially | Neither | Agree | Partially | Disagree | Strongly |
| Agree | | Agree | nor | Disagree | Disagree | | Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

- ___ 1. Sexual preference should not be a factor in employment opportunity.
- ___ 2. Homosexuals are just like everyone else, they simply chose an alternative lifestyle.
- ___ 3. Homosexuals should be isolated from heterosexuals.
- ___ 4. Homosexuals should not be discriminated against because of their sexual preferences.
- ___ 5. Homosexual acts should be illegal.
- ___ 6. Homosexuals are a danger to our young people.
- ___ 7. I would not like to work with a homosexual.
- ___ 8. Homosexuals should not hold high government offices.
- ___ 9. Job discrimination against homosexuals is wrong.
- ___ 10. Homosexuals should not hold leadership positions.

- | | | | | | | |
|-------------------|-------|--------------------|-------------------------------|-----------------------|----------|----------------------|
| Strongly Agree | Agree | Partially Agree | Neither Agree nor Disagree | Partially Disagree | Disagree | Strongly Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- ___ 11. Homosexuals do not corrupt the youth of America.
 - ___ 12. I would not want a homosexual to live in the house (apartment) next to mine.
 - ___ 13. If I found out one of my friends was a homosexual, our friendship would be severely damaged.
 - ___ 14. I would never have anything to do with a person if I knew he/she was a homosexual.
 - ___ 15. Apartment complexes should not accept homosexuals as renters.

=====
 Knowledge About AIDS

This section concerns your knowledge about AIDS. Circle the one number that corresponds to your level of agreement, whether you "Strongly Agree", "Agree", "Partially Agree", "Neither Agree nor Disagree", "Partially Disagree", "Disagree", or "Strongly Disagree". Please do not skip any items even if they do not directly apply to you.

- | | | | | | | |
|-------------------|-------|--------------------|-------------------------------|-----------------------|----------|----------------------|
| Strongly Agree | Agree | Partially Agree | Neither Agree nor Disagree | Partially Disagree | Disagree | Strongly Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- ___ 1. Most people who transmit the AIDS virus look unhealthy.
 - ___ 2. Anal intercourse is high risk for transmitting the AIDS virus.
 - ___ 3. Oral intercourse carries risk for AIDS virus transmission.
 - ___ 4. A person can be exposed to the AIDS virus in one sexual contact.
 - ___ 5. It is unwise to touch a person with AIDS.
 - ___ 6. Condoms make intercourse completely safe.
 - ___ 7. When people become sexually exclusive with one another, they no longer need to follow "safer sex" guidelines.
 - ___ 8. Most people who have been exposed to the AIDS virus quickly show symptoms of serious illness.
 - ___ 9. By reducing the number of different sexual partners, you are effectively protected from AIDS.
 - ___ 10. The AIDS virus does not penetrate unbroken skin.
 - ___ 11. Pre-ejaculatory fluids can carry the AIDS virus.
 - ___ 12. A person must have many sexual partners to be at risk for AIDS.
 - ___ 13. People carrying the AIDS virus generally feel quite ill.
 - ___ 14. Vaginal intercourse carries high risk for AIDS transmission.
 - ___ 15. Exclusively heterosexual people are not at risk for AIDS.
 - ___ 16. Healthy persons in AIDS risk groups should not donate blood.
 - ___ 17. A negative result on the AIDS virus antibody test can occur even for people who carry the virus.
 - ___ 18. Most persons exposed to the AIDS virus know they are exposed.
 - ___ 19. Mutual masturbation and body rubbing are low in risk unless the partners have cuts or scratches.
 - ___ 20. People who become exposed to the AIDS virus through needle-sharing can transmit the virus to others during sex.
 - ___ 21. Impaired memory and concentration, and motor deficits may occur in some AIDS patients.
 - ___ 22. AIDS virus may live in the human body for years before symptoms appear.
 - ___ 23. One can get AIDS from blood or sperm from a donor who has AIDS.
 - ___ 24. By using a condom during sex, one is always safe from AIDS.
 - ___ 25. AIDS is spread by sneezing, coughing, or touching.
 - ___ 26. An infected mother can give the AIDS virus to the baby during pregnancy and/or through breast feeding.
 - ___ 27. More women than men have been infected by AIDS virus.

- | | | | | | | |
|----------------|-------|-----------------|----------------------------|--------------------|----------|-------------------|
| Strongly Agree | Agree | Partially Agree | Neither Agree nor Disagree | Partially Disagree | Disagree | Strongly Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- ___28. Keeping in good physical condition is the best way to prevent exposure to the AIDS virus.
 - ___29. Showering after sex greatly reduces the transmission of AIDS.
 - ___30. Oral sex is safe if the partners "don't swallow".
 - ___31. Female-to-male transmission of the AIDS virus has not been documented.
 - ___32. Sharing toothbrushes and razors can transmit the AIDS virus.
 - ___33. Intravenous drug users are at risk for AIDS when they share needles.
 - ___34. Withdrawal immediately before orgasm makes intercourse safe.
 - ___35. Sharing kitchen utensils or a bathroom with a person with AIDS poses no risk.
 - ___36. Intravenous drug users become exposed to the AIDS virus because the virus is often contained in heroin, amphetamines, and the injected drugs.
 - ___37. A wholesome diet and plenty of sleep will keep a person from becoming exposed to the AIDS virus.
 - ___38. A cure of AIDS is expected within the next two years.
 - ___39. It is more important to take precautions against AIDS in large cities than in small cities.
 - ___40. Coughing does not spread AIDS.
 - ___41. Most present cases of AIDS are due to blood transfusions that took place before 1984.
 - ___42. A great deal is now known about how the AIDS virus is transmitted.
 - ___43. Donating blood carries no AIDS risk for the donor.
 - ___44. No cases of AIDS have ever been linked to social (dry) kissing.
 - ___45. The AIDS virus can be transmitted by mosquitoes or cockroaches.

=====

Knowledge about AIDS Transmission

This section concerns your knowledge about AIDS transmission. Circle the one number that corresponds to your level of agreement, whether you "Strongly Agree", "Agree", "Partially Agree", "Neither Agree nor Disagree", "Partially Disagree", "Disagree", or "Strongly Disagree" that you can contract HIV/AIDS through these means. Please do not skip any items even if they do not directly apply to you.

- | | | | | | | |
|----------------|-------|-----------------|----------------------------|--------------------|----------|-------------------|
| Strongly Agree | Agree | Partially Agree | Neither Agree nor Disagree | Partially Disagree | Disagree | Strongly Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- ___1. Wearing someone's jacket who has HIV/AIDS.
 - ___2. Riding in a friend's car who has HIV/AIDS.
 - ___3. Sitting in a room with a someone who has HIV/AIDS.
 - ___4. Donating blood to someone with HIV/AIDS.
 - ___5. Shaking hands with someone who has HIV/AIDS.
 - ___6. Assisting an emergency worker by covering a patient with HIV/AIDS with a blanket.
 - ___7. Using a water fountain and discovering that a person with HIV/AIDS used it just before you.
 - ___8. Visiting someone in the hospital on an HIV/AIDS ward.
 - ___9. Donating clothing to the Salvation Army that is given to a person with HIV/AIDS.
 - ___10. Taking a bite of someone's dinner who has HIV/AIDS.
 - ___11. Grading someone's exam who has HIV/AIDS.
 - ___12. Meeting a friend with HIV/AIDS for lunch.
 - ___13. Lending your class notes to someone with HIV/AIDS.
 - ___14. Sharing chips at a Mexican restaurant with someone with HIV/AIDS.
 - ___15. Drinking from a beer that belongs to someone with HIV/AIDS.
 - ___16. Being in class with someone with HIV/AIDS.

- | | | | | | | | |
|-------------------|-------|--------------------|-------------------------|-------------------|-----------------------|----------|----------------------|
| Strongly Agree | Agree | Partially Agree | Neither nor Disagree | Agree Disagree | Partially Disagree | Disagree | Strongly Disagree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
- _____17. Selling textbooks back to the bookstore that are later bought by someone with HIV/AIDS.
- _____18. Receiving clothing from a relative who died of AIDS.
- _____19. Eating dinner that was cooked by a friend with HIV/AIDS.
- _____20. Talking on the phone to someone with HIV/AIDS about a class assignment.
- _____21. Giving your hand-me-downs to a younger cousin with HIV/AIDS.
- _____22. Using a bathroom stall that has just been used by someone with HIV/AIDS.
- _____23. Using a pay phone just after someone with HIV/AIDS used it.
- _____24. Doing a class project with a classmate who has HIV/AIDS.
- _____25. Donating money to a civic organization that assists persons with HIV/AIDS in paying their bills.
- _____26. Sitting in a booth in a restaurant and discovering that a person with HIV/AIDS sat there just before you.
- _____27. Buying a car from a private owner who has HIV/AIDS.
- _____28. Sitting in a movie theater when the person behind you has HIV/AIDS.
- _____29. Selling your house to someone with HIV/AIDS.
- _____30. Buying a sweater that has just been tried-on by someone with HIV/AIDS.
- _____31. Being a dorm mate with someone with HIV/AIDS.
- _____32. Being a teacher's assistant when someone with HIV/AIDS is assigned an office cubicle next to yours.
- _____33. Donating food to a shelter for persons with HIV/AIDS.
- _____34. Standing in line in the cafeteria behind someone with HIV/AIDS.
- _____35. Traveling on a plane and finding out that you are seated next to someone with HIV/AIDS.
- _____36. Studying in the library when someone with HIV/AIDS sits next to you.
- _____37. Donating toys to a hospital and discovering they are being used by kids with HIV/AIDS.

Are you currently infected with HIV/AIDS? 1=YES 2=NO

Do you know someone with HIV/AIDS? 1=YES 2=NO

What I'm Like

For each item, Write 1 for "True" if you feel the statement describes you; or write 2 for "False" if you feel the statement does not describe you.

- _____1. I never hesitate to go out of my way to help someone in trouble.
- _____2. I am sometimes irritated by people who ask favors of me.
- _____3. I have never intensely disliked anyone.
- _____4. I sometimes try to get even rather than forgive and forget.
- _____5. There have been times when I was quite jealous of the good fortune of others.
- _____6. I am always willing to admit it when I make a mistake.
- _____7. I always try to practice what I preach.
- _____8. There have been occasions when I took advantage of someone.
- _____9. I would never think of letting someone else be punished for my wrongdoing.
- _____10. I never resent being asked to return a favor.
- _____11. I sometimes think that when people have a misfortune they only get what they deserve.
- _____12. I like to gossip at times.
- _____13. I have never been annoyed when people expressed ideas very different from my own.
- _____14. I have never deliberately said something that hurt someone's feelings.
- _____15. I sometimes feel resentful when I do not get my way.

APPENDIX D
PILOT STUDY 2 QUESTIONNAIRE

AIDS Questionnaire Development

This study is for the purpose of eliciting feedback from upper level psychology students about question meaning, content and wording. Please put a check next to the class in which you are currently enrolled?

Group Psychology Adult Dev. and Aging Psychodynamics of Women
 Experimental Methods Abnormal Psychology
 Other _____ (please list)

Please read each question carefully. Answer the questions in the boxes first and then answer the questions under the boxes. Please take your time and think about each question! Please use the back of this page if needed.

BOX A

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", "Neither Comfortable nor Uncomfortable", "Comfortable", "Somewhat Comfortable", or "Extremely Comfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | Extremely uncomfortable 1 | Somewhat uncomfortable 2 | Uncomfortable 3 | Neither comfortable nor uncomfortable 4 | Comfortable 5 | Somewhat comfortable 6 | Extremely comfortable 7 | |
|----|---------------------------------|--------------------------------|--------------------|-----------------------------------------------|------------------|------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A casual acquaintance with HIV/AIDS offers you a jacket while you are waiting at a bus stop on a cold day. |
| 2. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You casually shake hands with someone you are being introduced to with HIV/AIDS. |
| 3. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are out to dinner with a friend with HIV/AIDS who offers you a bite of his/her dinner. |
| 4. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | One of your classmates with HIV/AIDS asks to borrow your class notes. |
| 5. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are in a class after an exam and are asked to swap exams with the person next to you with HIV/AIDS. |
| 6. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are at a Mexican restaurant with a friend with HIV/AIDS and you are sharing the chips and dip. |
| 7. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You receive clothing that belonged to relative who died of HIV/AIDS. |
| 8. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You use a stall in a bathroom that has just been used by someone you know with HIV/AIDS. |
| 9. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are using a pay phone and discover that a person with HIV/AIDS used it just before you. |

What is the common idea in the 9 questions in Box A?

Which question(s) are closest to the common idea listed above? (list the number of the question(s) that apply). Why?

Which question(s) are furthest from the common idea listed above? (list the number of the question(s) that apply). Why?

Were any of the above 9 questions unclear? If so, which ones and why? (please be very specific)

What other questions could be added to this common idea?

Please read each question carefully. Answer the questions in the boxes first and then answer the questions under the boxes. Please take your time and think about each question!

BOX B

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", "Neither Comfortable nor Uncomfortable", "Comfortable", "Somewhat Comfortable", or "Extremely Comfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | Extremely uncomfortable 1 | Somewhat uncomfortable 2 | Uncomfortable 3 | Neither comfortable nor uncomfortable 4 | Comfortable 5 | Somewhat comfortable 6 | Extremely comfortable 7 | |
|----|---------------------------------|--------------------------------|--------------------|-----------------------------------------------|------------------|------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with an AIDS patient who is an IV drug user. |
| 2. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with an AIDS patient who contracted AIDS after receiving a blood transfusion. |
| 3. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with a gay male who contracted HIV/AIDS through unprotected sex. |
| 4. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with a priest/minister who has HIV/AIDS. |
| 5. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with a criminal who has HIV/AIDS. |
| 6. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You shake hands with a physician who contracted HIV/AIDS through accidental blood contact with a patient. |

What is the common idea in the 6 questions in Box B?

Which question(s) are closest to the common idea listed above? (list the number of the question(s) that apply). Why?

Which question(s) are furthest from the common idea listed above? (list the number of the question(s) that apply). Why?

Were any of the above 6 questions unclear? If so, which ones and why? (please be very specific)

What other questions could be added to this common idea?

Please read each question carefully. Answer the questions in the boxes first and then answer the questions under the boxes. Please take your time and think about each question!

BOX C

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", "Neither Comfortable nor Uncomfortable", "Comfortable", "Somewhat Comfortable", or "Extremely Comfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | Extremely uncomfortable | Somewhat uncomfortable | Uncomfortable | Neither comfortable nor uncomfortable | Comfortable | Somewhat comfortable | Extremely comfortable | |
|----|----------------------------|---------------------------|---------------|------------------------------------------|-------------|-------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 1. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You donate blood and find out it has been used by a recipient you do not know with HIV/AIDS. |
| 2. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You donate clothing to the Salvation Army and discover that it has been given to someone with HIV/AIDS. |
| 3. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You sell your textbooks back to the bookstore and discover that they were bought by someone you know with HIV/AIDS. |

What is the common idea in the 3 questions in Box C?

Which question(s) are closest to the common idea listed above? (list the number of the question(s) that apply). Why?

Which question(s) are furthest from the common idea listed above? (list the number of the question(s) that apply). Why?

Were any of the above 3 questions unclear? If so, which ones and why? (please be very specific)

What other questions could be added to this common idea?

Please read each question carefully. Answer the questions in the boxes first and then answer the questions under the boxes. Please take your time and think about each question!

BOX D

Circle the one number that corresponds to your level of comfort, whether you are "Extremely Uncomfortable", "Somewhat Uncomfortable", "Uncomfortable", "Neither Comfortable nor Uncomfortable", "Comfortable", "Somewhat Comfortable", or "Extremely Comfortable". Please do not skip any items even if they do not directly apply to you. Please think about each item carefully, as if you were actually in the situation!

| | Extremely uncomfortable 1 | Somewhat uncomfortable 2 | Uncomfortable 3 | Neither comfortable nor uncomfortable 4 | Comfortable 5 | Somewhat comfortable 6 | Extremely comfortable 7 | |
|----|---------------------------------|--------------------------------|--------------------|-----------------------------------------------|------------------|------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------|
| 1. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are assigned a new dorm mate with HIV/AIDS. |
| 2. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You go to visit someone who is in the hospital on the HIV/AIDS ward. |
| 3. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are in a class setting with a classmate who has HIV/AIDS. |
| 4. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | One of your classmates with HIV/AIDS calls you on the phone to ask you about a class assignment. |
| 5. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are studying in the library and someone with HIV/AIDS sits next to you. |
| 6. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | You are walking in the rain and are offered a ride from a friend with HIV/AIDS. |

What is the common idea in the 6 questions in Box D?

Which question(s) are closest to the common idea listed above? (list the number of the question(s) that apply). Why?

Which question(s) are furthest from the common idea listed above? (list the number of the question(s) that apply). Why?

Were any of the above 6 questions unclear? If so, which ones and why? (please be very specific)

What other questions could be added to this common idea?

Please read all the questions in each of the four boxes. Answer the following questions about the questions in all four boxes combined:

What is the common idea of the questions in all four boxes?

Which question(s) are closest to the common idea you mentioned directly above? (list the Box letter and question number). Why?

Which question(s) are furthest from the common idea you mentioned directly above? (list the Box letter and the question number). Why?

What other questions could be added to this overall common idea?

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