Interpersonal consequences of expressing concern about nuclear war

Ann Angell Dew
Abstract

The effects of sex role expectations within the context of the nuclear war issue were examined in this study. Sixty males and sixty females, ranging in age from 18 to 22 years, participated in this study. They were obtained from the introductory psychology courses at the University of Richmond. Each subject read a questionnaire, supposedly completed by another University of Richmond undergraduate, and answered two Likert-type questions measuring the degree to which the subject would like to meet and become friends with the target. The independent variables were sex of the target, sex of subject, and expression of concern about the nuclear war issue: either the nuclear weapons threat, the Soviet threat, or a control condition. The results of the MANCOVA indicated that mentioning the nuclear war issue did not produce significantly greater intended social distance by the subject. In addition, the sex role expectations within the nuclear war context were not found in this study.
Interpersonal Consequences of Expressing Concern about Nuclear War

Approved by:

James A. Polyson, Ph.D., Thesis Director
Barbara Sholley, Ph.D., Professor of Psychology
James Tromater, Ph.D., Professor of Psychology
Ken Blick, Ph.D., Graduate Coordinator

April 30, 1985
Interpersonal Consequences of Expressing Concern
About Nuclear War

By

ANN ANGELL DEW
B.A., Kenyon College, 1981

A Thesis
Submitted to the Graduate Facility
of the University of Richmond
in Candidacy
for the degree of
MASTER OF ARTS
in
Psychology

May, 1985
Richmond, Virginia

Running head: Consequences of Concern about Nuclear War
Interpersonal Consequences of Expressing Concern about Nuclear War

Stereotypic social perceptions of men and women is a well documented phenomena which has been studied from a variety of perspectives. Over the past thirty years men and women have agreed upon an image of a typical man who is strong, independent, worldly, aggressive, dominant and ambitious; a typical woman is described as gentle, dependent, nurturant, and tactful (Ashmore & Tumia, 1980; Broverman, Vogel, Broverman, Clarkson, Rosenkrantz, 1972; Fernberger, 1948; Ruble & Ruble, 1980).

Social role theory (Sarbin and Allen, 1968) is one framework for studying how men and women are perceived differently. Essentially, this theory postulates that people expect others to behave in a characteristic manner, i.e. a role, which is prescribed by their particular position within a social system. Sex role expectations are the specific beliefs, often derived from stereotypes, that an individual should conform to his or her respective sex role. Failure to do so may result in negative sanctions; conformity may bring about positive sanctions.

According to Broverman et. al. (1972), there are sex role stereotypes falling along complementary dimensions. Within the competency cluster men are described as "very aggressive, unemotional, objective, competitive, logical, worldly, direct, and easily able to separate feelings from ideas" (p. 61). Conversely, women are described as "uncomfortable about being aggressive, very emotional, very subjective, very easily influenced, very illogical, ignorant of the
way of the world, and unable to separate feeling from ideas" (p. 61). Within the warmth-expressiveness cluster women are characterized as "not using harsh language, very tactful, very aware of feelings of others, very gentle, and able to express tender feelings" (p. 61). On the other hand, men are seen as "very blunt, very rough, and not able to express tender feelings at all easily" (p. 61). Thus, it appears that women are believed to be fairly warm but unworldly and ineffective, whereas men are more reserved, aggressive, and competent.

These sex role stereotypes have been found to influence person perception in a variety of situations. As in Broverman's (1972) study, Dipboye, Arvey, and Terpstra (1977) found that women were judged to be friendlier, warmer, more emotional, and less informed than males, within an employment application process. It was concluded that the subjects attributed more favorable traits to male applicants than female applicants, in accordance with gender stereotypes relevant to the job skills.

In general, it has been shown that deviation from stereotyped sex role expectations engenders negative reactions to that person. Specifically, Thomas and Stewart (1971) found that women who professed deviant career goals, such as engineering as opposed to home economy, were viewed as needing more counseling. The conforming goals were seen as being more appropriate. Likewise, Abramowitz et al (1973) showed that politically liberal females were attributed significantly greater psychological maladjustment by nonliberal professional counselors, than similarly politically oriented males. It appears that such attitudes do not conform to the
traditional female role and thus are judged more severely and are seen as more indicative of psychological problems.

This study is designed to determine some perceived differences between males and females who express their concern about two aspects of the nuclear war issue. These have been growing interest in nuclear war issues in society and in psychology, as evidenced by letters published in the APA Monitor ("Nuclear war threat detonates response" Nov. 1982). Because the nuclear war issue is a relatively unpleasant and controversial issue it is predicted that there are prescriptive role expectations so that expressing political opinions about nuclear war may have a negative effect on intended social distance. For example, in a letter to the editor in the APA Monitor, one psychologist wrote of his difficulty in finding ways to introduce the nuclear war issue into casual conversation ("Weighty one-liners" Nov. 1982).

Survey data have suggested that there are gender differences in attitudes about nuclear war. Women are more concerned than men about the nuclear war issue (58% women, 50% men). Likewise, a smaller percentage of women than men agree with President Reagan's aggressive nuclear weapons policies (52% men, 31% women approving). Men are more likely to agree with Reagan's handling of U.S.-Soviet relations (54% men, 38% women) (Newsweek, 1983). The consistency between these recent survey data and traditional gender stereotypes suggest that sex role expectations may be implicated.

It is hypothesized that deviation from sex role expectations involving expressed concern about nuclear war will result in negative
interpersonal consequences. Numerous studies have shown that stereotyped sex role expectations produce differential assessments of males and females for expressing the same ideas that are role consistent for one sex and divergent for the other. Polyson (1978) discovered that young men who report sexual dissatisfaction are perceived by same-sex peers as having a greater likelihood of psychological disturbance compared to females reporting similar complaints. Presumably, sexual adequacy is a more important sex role expectation for young males, although those data, collected in 1977, are in need of replication in view of changing sex roles for women. Similarly, Hammen and Peters (1977) found that when subjects were presented with case histories of common reactions of stress, males were rejected more than females for displaying depressive behaviors that deviate from male sex role expectations regarding strength and self-reliance.

This, it is predicted that within this controversial nuclear war issue expression of attitudes which deviate from the respective sex role expectations will produce greater social distance. Because women are more concerned about the nuclear arms issue and because they are expected to be unworldly and nonaggressive, it is hypothesized that a women voicing concerns about the nuclear weapons threat will result in less negative reactions from others compared to a male voicing identical opinions. Conversely, because men are expected to be aggressive and competitive it is hypothesized that a male mentioning concerns about the Soviet threat aspect of this issue will be perceived as more role adherent than a female voicing the same concern and will receive less negative interpersonal sanctions.
In addition, these sex role expectations can also be applied to subjects' attitudes about the nuclear war issue. Specifically, is it hypothesized that male subjects will report a higher probability of wanting to interact with a target person who expresses concern about the Soviet threat because this attitude is characteristic of men's more aggressive sex role stereotypes. Because women are described as being uncomfortable about being aggressive, it is predicted that female subjects will report a higher likelihood of future interactions with a target person who expresses concern about the nuclear weapons threat.

The degree to which one person would like to interact or be friends with another can also be a function of similarity. As Byrne and colleagues (Byrne, 1971; Griffitt, 1974; Byrne and Nelson, 1965; Kraus, 1966; Byrne and Griffitt, 1966; and Byrne, Nelson, and Reeves, 1966) have found, expressed attraction for a stranger increases with the proportion of similar attitudes. In order to determine whether interpersonal consequences of expressing concern about nuclear war are influenced by attitude similarity, the subjects' own agreement or disagreement was used as a covariate. It was predicted that subjects who are generally more concerned about the Soviet threat would bless rejecting of a target person who mentions the same concern, and likewise for the nuclear weapons threat.

Method

Subjects

One hundred and twenty subjects were obtained from the University of Richmond's introductory psychology subject pool. Introductory
Consequences of Concern about Nuclear War

psychology students are required to complete three credit hours of research in order to fulfill a course requirement. They each received one hour of credit for their participation in this study. Sixty of the subjects were male, and sixty female, ranging in age from 18-22 years.

Stimulus Materials

The instruments used in this study consisted of an informed consent form, a Personal Information Questionnaire (PIQ), a questionnaire measuring the subject's reactions to the PIQ, a post experimental questionnaire, and a debriefing form (see Appendices).

The PIQ consisted of a series of personal questions supposedly answered by either another male or female student at the University of Richmond. In reality these questions were completed by the experimenter. This information about the person's family, future goals, assessment of strengths and weaknesses, social concerns, and attitudes about University of Richmond were identical on all the questionnaires except for the manipulated variables: the sex of the respondent and his or her attitudes about nuclear war. In the nuclear weapons condition the respondent answered the eighth question "News events or social issues of interest to you?" with "I'm concerned about nuclear weapons. I think the arms race is a great danger to humanity." In the Soviet threat condition the response was "I'm concerned about the Soviet nuclear build-up. I think that Soviet nuclear weapons are a great danger to the U.S.A." The control target's response was "I'm concerned about a lot of things going on in the news."

Two Likert-type questions measured the subject's reactions to the target person: "What is the likelihood that you would want to meet
and interact with this person?" and "What is the likelihood that you could become friends with this person?" They were presented with a scale ranging from 1 to 7 with 1 as unlikely, 4 as neutral, and 7 as very likely.

On a separate page following these two questions the subject was asked "Do you generally agree or disagree with the person's social concerns?" They again responded on a scale ranging from 1 to 7 with 1 as strongly disagree, 4 as neutral, and 7 as strongly agree.

Procedure

The subjects were divided by sex, and randomly assigned to one of six conditions: male target nuclear weapons threat: Soviet threat, control; or female target nuclear weapons threat, Soviet threat, or control. Ten subjects participated in each of these conditions.

The experimenter introduced the study to the participants as a study about first impressions. Subjects were informed that in a second stage of the study there might be an opportunity to meet the described individual in another session. This mild deception was intended to increase the element of realism in the experimental task. A brief description of the procedure was given and subjects then completed the informed consent form.

The experimenter gave the subjects a completed PIQ with instructions to read the questionnaire, and answer the questions on the following pages of the handout. Following this they filled out the post experimental questionnaire which assessed the general reactions to the study, and the particular reasons why they would either want or not want to meet the person; and what they actually thought this study
was about. This questionnaire was used to determine whether or not the subjects believed the mild deception. Ten subjects' data were omitted due to suspicion of authenticity of the stimulus material, as indicated by their responses on the post experimental questionnaire; four subjects' data were not used because of failure to complete the questionnaire correctly.

Finally, the subjects were debriefed. They received both a written and oral explanation about the mild deception, and the true purpose of the study: the effects of a person's gender and political attitude upon the subject's perception of him or her. It was made clear that the experimenter had filled out the PIQs, that the described student did not exist, and that there would be no further sessions.

Results

A 3(target's concern about Nuclear Weapons Threat, Soviet Threat, or Control) x 2(Sex of Subject) x 2(Sex of Target) factorial between-subjects multivariate analysis of covariance was performed on two dependent variables: the likelihood that the subject would want to meet and interact with the target person, and likelihood that the subject would want to become friends with the target person. The covariate was an item measuring on a 1-7 scale, the degree to which the subject generally agreed or disagreed with the target person's social concerns.

The Pearson correlation between the two dependent variables is r = .83, p .001, which suggests that they are both measuring similar concepts. The MANCOVA reveals nonsignificant results for the
Consequences of Concern about Nuclear War

following: sex of subject (F(2,106) = 1.01, p = .37), sex of target (F(2,106) = 1.34, p = .32), experimental condition (F(4,212) = .39, p = .81), sex of subject x sex of target (F(2,106) = 1.02, p = .37), sex of subject x experimental condition (F(4,212) = .88, p = .48), sex of target x experimental condition (F(4,212 = .71, p = .59), and sex of subject x sex of target x experimental condition (F(4,212) = .77, p = .55).

The correlation between the first dependent variable, likelihood of wanting to meet the target and the degree of agreement with the target's expressed concern is r = .43, which is significant at p < .0001. The individual correlations between the first dependent variable and the covariate are significant for subjects in each of the experimental conditions: nuclear weapons threat is r = .49, p < .0001; the Soviet threat is r = .31, p = .02; and the control condition is r = .52, p < .0001. The correlation between the second dependent variable, likelihood of wanting to become friends with the target and the covariate is also significant, r = .40, p < .0001. The individual correlations between the second dependent variable and the covariate are significant for subjects in each of the experimental conditions: nuclear weapons threat is r = .43, p < .0001; the Soviet threat is r = .32, p = .02; and the control condition is r = .52, p < .0001.

These results appear to support the attitude similarity hypothesis. However, a MANOVA was performed on the above main effects and interactions of the independent variables in order to account for the
possible loss of power associated with these moderate relationships. The MANOVA also reveals nonsignificant results. The grand mean of all cell means for both the dependent variables is 4.43, ranging from 3.7 to 5.0.

Discussion

The present data do not support the main effect hypothesis that nuclear war is an inappropriate topic of discussion with negative interpersonal sanctions for those who bring it up. In contrast to the recent evidence that nuclear war is an important and controversial issue in society (APA Monitor, Nov. 1982) the results of this study suggest that it is not critical in influencing interpersonal reactions in the acquaintance process.

Within this interpersonal context of nuclear war issues the function of sex role expectations were also investigated. Specifically, the hypothesis that nuclear weapons concern expressed by a female, as opposed to a male target, would produce less of an avoidance reaction was not confirmed. It appears that the expression of concern about a threat to humanity by a male is not seen to be deviant from the male sex role stereotype of competition and strength. In addition, the hypothesis that male Soviet threat targets would be perceived less negatively than female Soviet threat targets was not supported in this study. These results provide no evidence that a female voicing concern about aggression and dominance has deviated from the female sex role expectation of passivity and unworldliness.
Similarly, the hypotheses concerning sex of subject and type of nuclear war threat were not confirmed. Male subjects did not respond more negatively toward a target person who expressed concerns about the nuclear threat to humanity. Nor, did women show more negative reactions toward a target person who expressed concern about the Soviet threat, an attitude hypothesized to be contrary to women's more passive, traditional sex role stereotypes.

However, the attitude similarity hypothesis was supported by the results of this study. Subjects in all three groups showed a positive correlation between agreement with the target person, and the likelihood of interacting, and becoming friends with that person. Thus, although the sex role expectation hypotheses were not confirmed, it does appear that the similarity effect was a factor in determining the subject's reactions to the target person. As Byrne (1971), Griffitt (1974) and their colleagues (Byrne and Nelson, 1965; Kraus, 1966; Byrne and Griffitt, 1966; and Byrne, Nelson, and Reeves, 1966) have demonstrated, expressed attraction for a stranger increases with the perceived similarity of attitudes.

It is interesting to speculate about possible reasons for the nonsupport of the gender role expectation hypotheses. The population from which the subjects were drawn is an important factor to consider. In this case the subjects were young college students from the University of Richmond. Although nuclear war is an important issue (APA MONITOR, Nov. 1982) it did not appear to have an impact on students in this study. However, it is possible that their primary concerns are in other areas with respect to the acquaintance process.
The significant relationships between their responses on the dependent variables and the covariate, as well as their responses on the post experimental questionnaire suggest that they believe that the potentiality for nuclear war is a problem, but one which they feel they can do little about personally. In contrast, more immediate concerns such as pressures of college life seem more salient to this population. In addition, this generation might not reflect some of the sex role stereotypes which have been documented over the past 30 years (Broverman et. al., 1972). An additional possibility is that social role expectations may have developed beyond this form of stereotyping and may not be as important in determining social distance. A possible future research investigation could focus on the relationship of social movements, such as the Women's Liberation Movement, to these developments. A survey of older subjects (e.g. 30-40 yrs., 40-50 yrs., etc.) might be helpful in clarifying this question.

Another possible reason for nonconfirmation of these hypotheses might be that the experimental stimuli were not sufficiently salient. The nuclear weapons and Soviet response was embedded in a questionnaire containing information about the target's family, future goals, assessment of strengths and weaknesses, and attitudes about University of Richmond. Also, it was relatively brief in length and somewhat vague. Based on many of the responses on the post experimental questionnaire, it is conceivable that the subjects took greater notice of the more personal information about the target. Perhaps the experimental stimuli simply were not strong enough to produce an
effect on the subject's interpersonal reactions. In order to further investigate the effect of a male or female's social concerns on social distance, a longer, more specific declaration of the target's political attitude, devoid of other personal information might increase the saliency of the stimuli. On the other hand, lengthier political statements might be less pertinent to the initial acquaintance process.

Regardless of the reasons for the nonsupport of the gender role expectation hypotheses, it is encouraging to find that at least in this instance sex role stereotypes did not appear to significantly influence person perception. It is also encouraging that these college students did not react negatively to target persons who voice opinions about a current issue which is vital to human survival. As mentioned earlier, further research would help to delineate their contemporary importance among specific populations and situations.
References


Polyson, J. A., Chirico, C., Isenhart, C., Noonan, K., and Deck, J.,

Homophobic reactions to persons who express opinions about gay
rights. Unpublished manuscript.


Miller (Ed.), In the eye of the beholder: Contemporary issues

Sarbin, T. R., Allen, V. L. (1965). Role theory. In G. Lindzey and

E. Aronson (Eds.), Handbook of Social Psychology, Vol. 1
(2nd ed.). Reading, Mass.: Addison-Wesley.

clients with deviant and conforming career goals. Journal of
Counseling Psychology, 18, 352-357.
Footnotes

The questionnaire used in this study was based on the PIQ used in Polyson, Chirico, Isenhart, Noonan, and Deck's (unpublished manuscript) study "Homophobic reactions to persons who express opinions about gay rights." The approach they took in developing the questionnaire was based on the information integration theory (Anderson, 1974). Essentially, this theory postulates that both negatively and positively perceived information are integrated in interpersonal evaluations.
Table 1

Summary of the MANCOVA Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Wilkes Value</th>
<th>Degrees of Freedom</th>
<th>Approximate F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex of subject</td>
<td>.98</td>
<td>2</td>
<td>106</td>
</tr>
<tr>
<td>Sex of target</td>
<td>.98</td>
<td>2</td>
<td>106</td>
</tr>
<tr>
<td>Experimental Condition</td>
<td>.99</td>
<td>4</td>
<td>212</td>
</tr>
<tr>
<td>Sex of subject x Sex of target</td>
<td>.98</td>
<td>2</td>
<td>106</td>
</tr>
<tr>
<td>Sex of subject x Experimental condition</td>
<td>.97</td>
<td>4</td>
<td>212</td>
</tr>
<tr>
<td>Sex of target x Experimental condition</td>
<td>.97</td>
<td>4</td>
<td>212</td>
</tr>
<tr>
<td>Sex of subject x Sex of target x Experimental condition</td>
<td>.97</td>
<td>4</td>
<td>212</td>
</tr>
</tbody>
</table>
Table 2

Summary of the Individual Cell Means for both of the Dependent Variables

<table>
<thead>
<tr>
<th></th>
<th>Male Subjects</th>
<th>Female Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nuclear Weapons Threat Mean/St. Deviation</td>
<td>Soviet Threat Mean/St. Deviation</td>
</tr>
<tr>
<td>Male Target</td>
<td>*4.1/1.45</td>
<td>4.2/.92</td>
</tr>
<tr>
<td></td>
<td>**4.2/1.32</td>
<td>3.8/1.03</td>
</tr>
<tr>
<td>Female Target</td>
<td>4.6/1.35</td>
<td>4.8/.79</td>
</tr>
<tr>
<td></td>
<td>4.3/1.16</td>
<td>4.8/.92</td>
</tr>
</tbody>
</table>

Note: *Top number is DV1: likelihood of wanting to meet and interact with the target

**Bottom number is DV2: likelihood of wanting to become friends with the target.
Appendix A

INFORMED CONSENT FORM

I, ________________________, understand that I am being invited to participate in a project which is a part of a research study on FIRST IMPRESSIONS. This research is being carried out by Ann A. Dew, under the direction of Dr James Polyson. I also understand that I will be asked to complete a series of questionnaires and that I may also be asked to attend a follow-up session at a later date.

This investigation and the nature of my participation have been explained to me. I have also been informed that some details of the study may not be explained initially. (This is sometimes necessary since advanced knowledge may affect the results.) I am aware that the full nature of the study will be explained to me during a debriefing at the end of the study.

I further understand that my identity will be held confidential and my responses will be filed in coded form so that I cannot be identified. Also, if at any time I object to any aspect of this study, I may withdraw my consent and my participation, without penalty.

Any publications resulting from this study will contain data which is anonymous and which does not disclose the identity of individual participants.

I have been given an opportunity to ask questions, and all such questions have been answered to my satisfaction.

I hereby voluntarily agree to participate in the study.
Appendix B

PERSONAL INFORMATION QUESTIONNAIRE (PIQ)

Please fill in the following information.

Name: ___________________________  Social Security #: ________________

Sex: ___________________________  Marital Status: _____________________

Year in school: ___________________  Major: _________________________

1.) Do you live on campus? ____________________________

2.) What is your general opinion of U. of Richmond? ________________

3.) Where is your hometown? ____________________________

4.) How well do you get along with your parents? ________________

5.) Do you have any brothers and sisters? If so, where are they and what are they doing? ________________

6.) What are your career goals? ____________________________

7.) What activities or hobbies do you enjoy? ________________

8.) News events or social issues of interest to you? ________________

9.) What would you say are your main problems at this time? ________________

10.) What do you like best about yourself? ________________

11.) What do you see as your personal weaknesses? ________________
Appendix C

Name: 
Social Security No.: 
Sex: 
Age: 
Year in School: 
Phone No.: 
Race: 
Marital Status: 
Major in School: 

Instructions

After reading these instructions you will be handed a Personal Information Questionnaire which was filled out by a University of Richmond student who previously participated in this experiment. Read this PIQ carefully. After reading the PIQ, please turn to the next page where you will be asked to express your impressions of the person who filled out the PIQ. After that, please follow the written instructions on the remaining pages. The purpose of this study is to determine how college students form impressions of each other from written information and from face-to-face interactions. (You may be asked to meet and interact with the person whose PIQ you'll be reading.) Before you begin I would like to thank you for participating.
Appendix D

Name: Sex:

Social Security #:

Please answer the following questions pertaining to the student whose PIQ you have just read. Answer by circling the appropriate number along the scale. You may refer back to the PIQ if you wish.

1.) What is the likelihood that you would want to meet and interact with this person?

Unlikely Neutral Likely
1 2 3 4 5 6 7

2.) What is the likelihood that you would want to become friends with this person?

Unlikely Neutral Likely
1 2 3 4 5 6 7
Appendix E

Name:

Social Security #: 

1.) Do you generally agree or disagree with this person's social concerns?

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please explain:
Appendix F

POSTEXPERIMENTAL QUESTIONNAIRE

1. In a few sentences please describe your feelings or reactions to the person who filled out the PIQ. Basically, why would you either want to meet or not want to meet him/her?

2. Why would you either want or not want to become friends with this person?

3. In a sentence or two please give any comments you would like to make regarding this study.

4. In your opinion, what is this study about?

5. Do you think there are any weaknesses in this study which might be improved in the future? If so, what are they?

6. Do you think there was more to this study than meets the eye? Please explain.

Again, Thank-you!
Appendix G

Name:

Social Security #:

DEBRIEFING

1.) The PIQs were not filled out by U. of Richmond undergraduates but were put together by the experimenters.

2.) The reason this was done was so that we could keep certain information constant for all the PIQs while varying certain pieces of information, such as the source of nuclear war threat. For example, some of you received a PIQ in which the danger of nuclear weapons was stressed while some of you received a PIQ in which Soviet aggression was emphasized. Some of the PIQs contained no reference to the nuclear war issue and this was the control condition.

3.) Since the person filling out the PIQ was not an actual undergraduate student, you will obviously not be meeting and interacting with this person in the future. (Previous studies have shown that the hypothesized effects are more likely to occur when the subjects believe that they may be interacting with the target person.)

4.) This study is being done so that we might better understand how people's expectations about political attitudes expressed by either a male or female affect communication. Please do not mention anything about this study to anyone outside of this session because this might invalidate any data which will be collected.

5.) Are there any questions or comments?
Vita

Ann A. Dew was born in Norfolk, Virginia on March 17, 1959, and raised in West Newbury, Massachusetts. She graduated from Kenyon College in 1981, with a B.A. in Psychology. While earning her Master of Arts at the University of Richmond she conducted additional research on the topic of nuclear war. She presented a paper "The Effects of the Nuclear War Threat on Children and Youth: Educational Implications", co-authored by James A. Polyson, Ph.D. at the American Psychological Association in Toronto, Canada in August, 1984. She is presently employed as a psychological assistant, performing psychological testing on a hospital population.