

MOTIVATIONAL ASPECTS OF ANTINUCLEAR  
AND PRODEFENSE ACTIVISM

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1984

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
DOCTOR OF PHILOSOPHY  
December, 1989

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## ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to the members of my Committee, Ken Sandvold, Larry Brown, and Al Carlozzi, and especially to my Chairman, Bill Rambo, for his guidance in this research, his persistent good humor, and the many hours of stimulating conversation we shared during my tenure at the university.

I am also thankful for the encouragement and support of many friends and relatives. My parents, Fred and Eleanor Rountree, deserve special gratitude for their unflagging support and generosity. I am indebted to my brother and sisters, several aunts and uncles, to my grandmothers, and to my wife's parents, all of whom provided encouragement in their own special ways during my graduate study.

To my closest friend and companion, Linda, and to our daughters, Leslie and Valerie, I am most deeply appreciative. Their loving patience allowed me to work long hours without interruption, but most importantly, they prevented me from losing sight of Life's real value.

Finally, a number of individuals deserve special recognition for their singular contributions to this project. Many thanks to Diana for her reliable encouragement, wise counsel, and friendship; to Dave Shaw for providing helpful feedback on an early draft of this

paper; to Paul Koren for his assistance with the data analysis; to Gary Weed for making his considerable computer skills available; and to all those who either participated in the study or assisted with subject recruitment.

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## CHAPTER I

### INTRODUCTION

The most destructive war in human history ended with the dawning of the nuclear age. According to the Center for Defense Information (Beyond War, 1985) present worldwide stockpiles of nuclear weapons represent 6000 times the destructive firepower used by all combatants in World War II, including the bombs that destroyed Hiroshima and Nagasaki. This is the equivalent of nearly 3 tons of TNT for every person on the planet today. Most of the nearly 50,000 nuclear warheads reside in the military arsenals of the United States and the Soviet Union, but Great Britain, France, the Peoples' Republic of China, and India also possess nuclear weapons. Additionally, perhaps a dozen other countries either possess the necessary technology for their manufacture or are very close to acquiring it.

Scenarios for global nuclear war vary widely in their estimates of its probable consequences. One of the most pessimistic scenarios is that nearly one-half the world's human population (mostly in the northern hemisphere) would be killed outright or would die quickly from various injuries including radiation effects (Sagan, 1986).



Surviving the initial effects, millions more would then die from starvation and disease. The now famous TTAPS model (Turco, Toon, Ackerman, Pollack, & Sagan, 1983) predicts that detonation of even 1% of existing nuclear weapons could trigger a "Nuclear Winter" leading to an immediate and dramatic drop in atmospheric temperature and a prolonged cessation of photosynthetic activity eventuating in the extinction of thousands of plant and animal species, possibly including humankind. A more optimistic scenario envisions an effective civil defense system that could shelter or relocate people away from targeted areas (Kahn, 1984).

In recent years there has been a rising tide of public concern about nuclear issues. With the deployment of new weapons systems by each of the super-powers, the citizenry of many Eastern and Western nations has developed an increasing awareness of the danger. In the United States for example, the Nuclear Freeze movement gained widespread support with many state legislatures and individual municipalities voting in favor of resolutions to halt the arms race or declaring themselves to be "nuclear-free zones." Somewhat more recently, a number of organizations have begun to lobby for programs to help people survive nuclear war. Such programs would include a comprehensive civil defense system and an anti-ballistic missile defense, the Strategic Defense Initiative proposed by President Reagan in 1983.

Although these groups differ in many ways, especially in their support or opposition to nuclear policy issues, they are similar in their concern about the danger of nuclear war and, unlike the majority of Americans, they have made an active behavioral response to the nuclear threat. The purpose of the present study is to develop a better understanding of the factors that motivate individuals to nuclear activism.

For the sake of clarity, the term "antinuclear" will be used to refer to those who advocate a freeze or reduction in nuclear weapons and who believe that arms control is the best way to prevent nuclear war. "Pro-defense" will refer to those who support a strong military and civilian defense as the preferred strategy. The term "activist" refers to those who have made a commitment to these issues by joining an organization or engaging in activities for the purpose of influencing others about nuclear issues. Thus, activists are distinguished by their behavior rather than their attitudes.

Some might object that the prefix "anti" is pejorative (emphasizing what is opposed rather than what is proposed) and prefer the term "peace" activist. However, this characterization unfairly suggests that an opposing point of view is anti-peace. "Pro-disarmament" might be an acceptable alternative, but it, too, is imprecise. It is likely that many prodefense advocates would also support disarmament policies under certain conditions. Moreover,

it is likely that not all antinuclear activists would agree with some disarmament proposals. Imprecise as these terms are, they reflect the primary security concerns of each group. "Antinuclear" was chosen to reflect the belief that nuclear weapons pose the primary threat to security and "Prodefense" to reflect the view that nuclear weapons together with a system of national defense are necessary for national security.

#### Research Relevance

There are a number of reasons for taking a closer look at those who have taken a strong behavioral stance in support of or in opposition to various nuclear weapons policies. In the first place, though psychology has long had an interest in many of these issues (cf., Morawski & Goldstein, 1985; Rudmin, 1986) very few studies have attempted to explain the political activism of ordinary citizens. In part, this may be due to the relatively recent emergence of many of these organizations. However, it seems clear that nuclear activism is a large and growing social movement. In fact, the largest mass demonstration in U.S. history attracted 700,000 people to New York City in 1982 in behalf of a nuclear freeze.

Though little research has been done in this area, somewhat more is known about antinuclear activists, possibly because antinuclear organizations are more numerous, although it is not certain that this is the case.

To date, only three studies (Fiske, Pratto, & Pavelchak, 1983; Locatelli & Holt, 1986; Tyler & McGraw, 1983) have investigated antinuclear activists and only one (Tyler & McGraw, 1983) included a prodefense sample. One other study (Wolf, Gregory, & Stephen, 1986) used a sample of people sympathetic to antinuclear proposals but who were not activists. Still, relatively little is known about either type of nuclear activism.

It is not clear to what extent present-day activists resemble other forms of political activism past or present. Certainly grass-roots citizen activism of any type is the exception rather than the rule (Milbrath & Goel, 1977). One of the major differences between nuclear activism and more recent social protest movements such as the anti-war movement in the 1960's and 1970's is that nuclear activism is not primarily a university-based phenomenon. Antinuclear groups, for example, appear to be largely middle class. Many of these groups reflect the concern and expertise of various professional organizations, and one, the International Physicians for Social Responsibility, received the Nobel Peace Prize for its work in educating the public about the medical consequences of nuclear war.

Another reason for learning more about nuclear activism is that it serves as one model for coping with the stress of the nuclear threat. There are many ways of coping with any stressor, some more or less adaptive than others, but in a time when 40% admit they are worried or

concerned about the possibility of nuclear war (Kramer, Kalick, & Milburn, 1983), it behooves us to know more about how people are coping with this fear. Nuclear activists explicitly admit their concerns (Tyler & McGraw, 1983) and an examination of the efficacy of their coping strategies may provide useful information about what has been called "anticipatory coping" (Lazarus & Launier, 1978).

Finally, because they are visible and outspoken about their concerns, nuclear activists may provide important role models for young people attempting to cope with their own fears and anxieties about nuclear war (Tyler & McGraw, 1986). Studies in the U.S. and elsewhere have found that many young people are very frightened about the prospect of nuclear war (Bachman, 1983; Beardslee & Mack, 1983; Goldberg, LaCombe, Levinson, Parker, Ross, & Sommers, 1985; Goldenring & Doctor, 1984, 1986; Goodman, et al., 1983; Solantaus, Rimpela, & Taipale, 1984). Studies further suggest that much of the anxiety young people experience is the result of their perceptions that adults either feel helpless or are apathetic about these issues (Goodman, et al., 1983; Greenwald & Zeitlin, 1987; Simon, 1984; Zeitlin, 1984), and that they are greatly reassured when they become acquainted with adults who do not demonstrate helplessness and hopelessness (Myers-Walls & Fry-Miller, 1984; Snow & Goodman, 1984; Van Ornum & Van Ornum, 1984).

Despite the large numbers of people who identify themselves as nuclear activists, relatively little is known

about them. The few studies of activists that have been published to date have examined attitudes (Tyler & McGraw, 1983; Wolf, Gregory, & Stephen, 1986), and cognitive images of nuclear war (Fiske, Pratto, & Pavelchak, 1983). While these studies have identified a number of differences between activists and non-activists, the antecedents of these differences have not been closely examined.

#### Statement of the Problem

The purpose of the present study was to develop a more complete understanding of the type of individual behaviorally committed to nuclear activism. A few prior studies have described certain distinguishing characteristics of antinuclear activists such as particular attitudes (Tyler & McGraw, 1983), but the picture is far from complete. For example, the fact that nonactivists share many of these same attitudes (Locatelli & Holt, 1986) indicates that the attitudes that have been examined are not sufficient in themselves to explain activist behavior, at least for those in the antinuclear camp. In her review, Fiske (1987) notes that antinuclear activists do not differ markedly in most ways from the general public. That is to say, activists do not differ markedly in terms of the variables that have been examined thus far. It is possible that critical variables have yet to be identified. It is also possible that activists differ from the general public primarily in quantitative ways. An example might be that

activists' attitudes are not fundamentally different from those of most people, but the intensity with which they are held is different.

The present study has attempted to develop a more complete model of activism by examining in greater detail the most promising factors that have been previously identified as well as additional variables that may play an important role. Some of these variables were derived from research in other areas including investigations of stress and coping and in studies of political participation.

The principal dependent variables that were examined here include several measures of perceived threat, and the personal resources activists feel they bring to bear to influence public debate and the political process. In addition, this study has investigated these variables both quantitatively and qualitatively through questionnaires and in-depth interviews with both prodefense and antinuclear activists, as well as with individuals who favor either prodefense or antinuclear policies, but who are not so actively involved in these organizations. The primary comparisons in this study are between activists and nonactivists. Secondly, prodefense and antinuclear groups will be contrasted in order to clarify their respective positions and to identify the ways in which activists in both camps resemble one another. The overall goal then is to develop a better understanding of the psychosocial antecedents to nuclear activism.

## CHAPTER II

### REVIEW OF THE LITERATURE

The review of the literature is divided into four major sections. The first will briefly review psychology's contributions to an understanding of the nuclear arms race. Section two will review research on the psychological implications of living with the threat of nuclear war. The third section examines the various responses people make to the nuclear threat and the factors associated with those responses. This includes a review of the research on nuclear activism and factors which are believed to mitigate an activist response. The final section examines in greater detail the factors which seem most important in promoting nuclear activism and which will be the primary focus of the present study. This section draws from the research on nuclear activism, political participation, and models of how people cope with threatening events.

#### Psychology and the Arms Race

The nuclear arms race and the ever-present possibility of catastrophic accident or war is a multi-faceted problem, depending as it does on historical traditions, political strategies, and scientific technologies. But on a



fundamental level, these are also psychological problems and deeply rooted in issues that have long been the domain of psychological investigation. One historian (Rudmin, 1986) has reviewed psychology's long tradition of exploring the roots of human conflict and has cited the personal, sometimes prescient contributions of such luminaries as Franz Brentano, Ivan Pavlov, William James, and William McDougall. The years following World War II saw major advances in this area with research in authoritarianism, ethnocentrism, nationalism, prejudice, group conflict, and aggression.

The American Psychological Association (APA) was one of the first professional organizations to address the implications of nuclear war (Rudmin, 1986). In 1945, Charles Osgood, Otto Klineberg, Gardner Murphy, and other prominent psychologists were joined by more than half of the APA membership and endorsed a peace petition prepared by Gordon Allport (Allport, 1945). And by 1947, both the APA and the Society for the Psychological Study of Social Issues had standing committees on International Peace, Atomic Energy, and Atomic Education (Morawski & Goldstein, 1985).

Although these committees were relatively short-lived, they provided leadership and set the agenda for much of the work to follow. They also agreed, at least implicitly, on at least two major points (Morawski & Goldstein, 1985; Rudmin, 1986): First, was that problems of international

relations, including nuclear weapons policies were psychologically based problems that could be addressed from expert psychological knowledge and research methodology. Secondly, there was a general agreement that informed public debate of all the many issues was necessary.

As the nuclear threat has grown more ominous, and particularly during the past 25 years, many psychologists have begun to focus on nuclear issues directly. There are several reasons for this. One is that many have come to view the threat of nuclear war as humanity's pre-eminent social problem and believe that if alternatives to the arms race are not implemented quickly all other problems will be inconsequential (cf., Thomas, 1980; Walsh, 1984).

Secondly, nuclear weapons are unique in many ways and nuclear war is not strictly comparable to previous wars. It has been argued that deterrence strategies, sensible perhaps with conventional armaments, are not reasonable in the nuclear age (Frank, 1982, 1983; Holt, 1984; Kull, 1984). Nuclear weapons are qualitatively different from conventional weapons; they are immensely more powerful and have widespread and persistent radiation effects. Moreover, missile delivery systems pose special problems. Their vulnerability to pre-emptive attack reduces the opportunity for rational decision-making and tempts leaders to launch them quickly at the first indication of provocation. The TTAPS study (Turco, Toon, Ackerman, Pollack, & Sagan, 1983) has demonstrated the impotency of

nuclear weapons. No longer is it possible to inflict damage on one's adversary without destroying oneself as well.

The third factor which has prompted many researchers to look more specifically at nuclear issues is that many have come to believe that growing up in the nuclear age has predisposed recent generations to a number of problems, both social and individual. Among the problems most often cited are impulsivity and an inability to delay gratification (Mack, 1985), reluctance to make commitments to others and to the future (Goodman, Mack, Beardslee, & Snow, 1983), materialism and self-indulgence (Frank, 1984), depression and anxiety (Nelson, 1985), drug use (Newcomb, 1986), and suicide (Rogers, 1982).

The largest body of work to date has attempted to understand the underlying causes of international hostility and the nuclear arms race. In this vein, a number of analysts have emphasized the role of outdated ideas (Deutsch, 1983; Frank, 1982, 1983), faulty assumptions (Holt, 1984; Milburn, 1961; Tetlock, 1983), and inflexible cognitive processes (Glad, 1984; Holt, 1984; Kull, 1984). Many have pointed to the role of nationalism and sought to explicated its roots in motivational (Frank, 1961; Menninger, 1983; Moyer, 1985; Stein, 1985; Volkan, 1985), perceptual (Deutsch, 1962; Osgood, 1961; Stagner, 1961; White, 1968, 1984), and psychosocial factors (Deutsch, 1983; Erikson, 1985; Mack, 1981, 1984; Pinderhughes, 1979).

In the early 1960's, a number of psychologists sought to devise specific programs to bring the arms race under control (Deutsch, 1961; Katz, 1961; Milburn, 1961; Russell, 1961). Perhaps the most ambitious work in this areas was done by Charles Osgood (1961, 1962). Recognizing mistrust as a major component in the arms race, he formulated a program to gradually reduce mistrust between nations. His proposal, known as GRIT (Graduated Reciprocation in Tension-Reduction), called for unilateral reductions in armaments. GRIT emphasizes that mutual trust need not be a prerequisite to successful arms reduction. Rather, either side can initiate the process independently without jeopardizing its own security, and trust can develop as the other side is encouraged to respond in kind.

Work in these areas continues today, however, recent years have seen the emergence of a new focus of empirical investigation. Inspired by the research of Escalona (1965) and Schwebel (1965) psychologists have begun to examine the psychological implications of living with the threat of nuclear war.

#### The Psychological Impact of the Nuclear Age

Interviewing people around the country Carey (1982) inquired about childhood memories of "the bomb" and civil defense exercises. Most had vivid recollections of the Cuban missile crisis, reports of contaminated food

products, school evacuation exercises, and fear of nuclear war. Although few of these people identified themselves as activists, many admitted they were still haunted by these childhood experiences and continued to experience a sense of apprehension years later.

Several studies in the early 1960's found surprisingly widespread and intense fears of nuclear war among school-age children. Asking open-ended questions about attitudes toward war and civil defense measures, Schwebel (1965, 1982) queried 3000 students following the Berlin crisis in 1961, and repeated the study with 300 students the following year during the Cuban missile crisis. He found that war was very much on the minds of these students and that most admitted being afraid. In both studies students reported feeling helpless, angry, and pessimistic about the future. Many admitted that they tried not to think about the future at all. In her study shortly after the Cuban crisis, Escalona (1965, 1982) asked 250 students about their hopes and expectations for the future. Prompted by no references to war or to nuclear weapons, more than 70% of the students mentioned the bomb and most painted a pessimistic picture of their future.

In a related study, Adams (1963) inquired about the social concerns of children and youth and found a surprising interest in U.S.-Soviet relations. Four thousand students ranging in age from 10 to 19 years were asked to identify the single greatest problem facing the

U.S. More than 65% cited international problems and war with the Soviet Union was the most frequently identified concern at every age level.

Retrospectively, it seems reasonable to expect such heightened concern among young people, especially considering the events then taking place. At that time, however, the fact that children were even aware of the larger social environment was an unexpected finding (Escalona, 1982). Simple as their research was, both Schwebel and Escalona speculated that the threat of nuclear annihilation might exert an insidious influence on healthy psychological development.

Recent studies continue to support the findings of Schwebel, Escalona, and Adams that large numbers of young people are very frightened about the possibility of nuclear war and pessimistic about their future. To date, research has been conducted in the United States (Bachman, 1983; Beardslee & Mack, 1983; Goldenring & Doctor, 1984, 1986; Goodman, Mack, Beardslee, & Snow, 1983), Canada (Goldberg, LaCombe, Levinson, Parker, Ross, & Sommers, 1985), Finland (Solantaus, Rimpela, & Taipale, 1984), the Soviet Union (Chivian, Mack, Waletzky, Lazaroff, Doctor, & Goldenring, 1985), and Columbia (Ardila, 1986) among others.

Despite differences in sampling procedures and methodology these studies support a number of conclusions. Foremost is that significant numbers of children and adolescents are concerned, worried, and fearful about the

possibility of nuclear war. Ranging from a significant minority to the large majority, young people respond to general inquiries about the future with references to nuclear war. When questions ask specifically about nuclear issues, the number expressing concern increases. Secondly, there are age differences: children are more anxious than adolescents and younger teens are more anxious than older teens. Finally, there are national differences with young people from a Third World country (Columbia) and a non-aligned nation (Finland) expressing the highest levels of anxiety.

Family studies have added further support for the claim that the nuclear threat exerts negative psychosocial influences on people of all ages. In his clinical work with families, Simon (1984) has observed the unsettling effect the subject of nuclear war has on open family discussion. Most parents are reluctant to share their personal feelings, and often discourage their children's expressions as well.

Allerhand (1965) and his colleagues interviewed 200 families and found that while more than 70% of these parents reported that their children had voiced fears about nuclear issues, fewer than half had actually talked with their children about these fears. Allerhand concluded that while young people are keenly aware of international tensions and social crises, adults "are at best uncomfortably available" to respond helpfully (p. 129). He

viewed these parents as a microcosm of a larger society that, because of denial or emotional numbing, was equally unprepared to address the object of these concerns, i.e., the nuclear arms race.

Zeitlin (1984) believes that in many instances children actually collude to protect their parents. Through extensive family interviews he observed that:

The large majority of parents feel over-whelmed by the nuclear issue, and many children, although troubled, are protecting their parents by not bringing up their concerns, by saying they are not really bothered, or even by reassuring their own worried parents (p. 26).

Zeitlin describes this role reversal (where children protect the parents) as a "collapse of generational boundaries" (p. 26). In effect it is an implicit admission by all parties that, in a world threatened by nuclear holocaust, adults are no longer capable of offering reasonable assurances of protection and care. Moreover, it entails a recognition that social organization, maybe even life itself, is in jeopardy. As Simon (1984) has written, "This is more than a fear of personal death. It is a fear that nullifies all human aspirations and all commitments to the future" (p. 6).

Parents and adults may wish to avoid discussing these issues for fear they can offer nothing helpful or may even add to the anxiety of young people. This perception was



expressed by many parents in a series of interviews with twenty-five families (Greenwald & Zeitlin, 1987). Without exception, however, younger children were quite eager to talk. They freely expressed their feelings and ideas and were reassured by hearing their parents and older siblings do the same. In these interviews, older adolescents tended to be more reserved at first. Until they were assured that their parents were really willing to listen and to speak honestly themselves, teens often remained silent or even denied an interest in the subject. Whenever parents expressed their own feelings, even feelings of fear and vulnerability, adolescents did the same.

Studies of family interactions around the subject of nuclear war suggest that adults, too, have a great deal of anxiety about these issues. They are reluctant to discuss them with their children, and in many cases, reluctant to think about them at all. Greenwald and Zeitlin (1987) believe that much of the anxiety experienced by these parents is a reflection of their own developmental issues, specifically, what Erikson (1963) calls generativity needs. In a narrow sense this is a "concern in establishing and guiding the next generation" (p. 267). In a larger sense, however, generativity manifests as a concern about the world at large and "Care for the creatures of this world" (p. 267-268).

The implications of the present research are that the shadow cast by the potential for nuclear war is having an

adverse effect on optimal psychological development. While it is premature to conclude that nuclear anxiety promotes frank, psychological illness, the last 25 years has seen a dramatic increase in depressive illness among children, adolescents, and young adults ("Depression", 1987). And at least one study has reported a strong correlational relationship between nuclear anxiety, depressive symptoms, and drug use among older adolescents and young adults.

The real concern of many psychologists, however, points to more subtle and insidious influences. Escalona (1982) argues that the failure of society, collectively and individually, to address the nuclear issue in a way that offers realistic hope serves to undermine the trust that young people have in adult leadership, in social and political institutions, and diminishes optimistic expectancy about the future. She has stated her position concisely:

Growing up in a social environment that tolerates and ignores the risk of total destruction by means of voluntary human action tends to foster those patterns of personality functioning that can lead to a sense of powerlessness and cynical resignation (1982, p. 601).

She goes on to predict that, beyond the effects on the individual, these circumstances "can render the next generation less well equipped to avert actual catastrophe" (p. 601).

## Responses to the Nuclear Threat

Although the anti-nuclear movement has grown rapidly in recent years, the fact is that relatively few people have made a behavioral commitment to this issue in spite of opinion polls which suggest widespread concern in the general public (Fiske, 1987). This section will review what is known about the kinds of behavioral responses people make toward nuclear issues beginning with an examination of some of the factors believed to mitigate activism. The second part will review the empirical research on nuclear activism and delineate the factors that are known to distinguish activists. The third and final part of this section will examine additional variables drawn from other areas of social science research that appear to be relevant to this topic.

### Explaining Inactivism

Public opinion surveys have chronicled American attitudes about nuclear issues for over four decades (Kramer, Kalick, & Milburn, 1983). In their survey of this opinion research, Kramer and his colleagues found that in 1956 approximately 14% of the public reported they worried often or worried a great deal about nuclear war. By 1982 this figure had risen to 28%, or about one adult in four. Since 1946, between two-thirds and three-fourths of Americans has believed that any major military confrontation with the Soviet Union would result in nuclear

war (Kramer, et al., 1983). Local samples of urban adults reveal that on the average people estimate a chance of one in two (Fiske, Pratto, & Pavelchak, 1983) to one in three (Tyler & McGraw, 1983) of personally experiencing a nuclear war. Finally, the large majority of Americans believes that nuclear war is neither survivable nor winnable (Yankelovich & Doble, 1984). Given these kinds of responses, many psychologists have tried to explain the apparent complacency of the general public (Goldman & Greenburg, 1982; Lifton, 1982; Mack, 1981, 1982; Nelson, 1985).

One explanation might be that people are simply uninformed about nuclear issues (Nelson, 1985). This is somewhat supported by evidence that people, young and old, are not very knowledgeable about nuclear technologies or policy matters (Cooper, 1979; Schwebel, 1982; Zweigenhaft, 1985). On the other hand, responses to opinion surveys suggest that most people feel they have sufficient information to voice an opinion. Furthermore, with the frequent media coverage of many of these issues it would seem to require more effort to avoid information than to obtain it.

Because the world has never experienced the kind of nuclear exchange envisioned by modern military strategists, nuclear weapons are said to have a quality of psychological unreality (Frank, 1980) or to be unimaginable (Mack, 1982). Frank (1980) suggests that because nuclear

weapons have not been used in more than 40 years, we have become habituated to the danger. The implications are that these types of psychological processes undermine the sense of danger that is necessary to provoke and sustain an adaptive response to the nuclear threat (Frank, 1980; Mack, 1980).

A motivational explanation favored by many clinically minded psychologists involves some form of denial or repression (Lifton, 1982; Moyer, 1985; Nelson, 1985; Salguero, 1983). These responses are often effective at reducing anxiety and inner turmoil, but may impede more adaptive responses. In the face of real danger, anxiety is a powerful motivator for survival (Goldenring & Doctor, 1986). Avoidance strategies such as denial and repression may provide psychological comfort in the near-term, but at the expense of effective survival strategies in the long-term (Goldenring & Doctor, 1986; Suls & Fletcher, 1985; Walsh, 1984).

Lifton (1980, 1982) coined the term psychic numbing to describe a process whereby feelings are divorced from the awareness of danger. Psychic numbing is neither denial nor repression in the classic sense for there is cognitive awareness, but without the appropriate emotional components to mediate an active response. Lifton believes that the nuclear threat requires such extraordinary coping responses: "In order to go about business as usual, one has to deaden one's feelings about what one knows" (1980,

p. 332).

Most of these explanations for inactivism have yet to be tested empirically, and in some cases it is not clear how they could be tested. Indirect evidence does suggest, however, that there is a quality of unreality about nuclear war. For example, first person accounts of the bombing of Hiroshima (Lifton, 1968; Thurlow, 1982) differ sharply from the kinds of images the average American has of nuclear war (Fiske, et al., 1983). When asked what nuclear war might be like, subjects queried by Fiske and her colleagues responded with rather general, abstract descriptions of death and destruction lacking much detail. Hiroshima survivors, in contrast, were quite specific in their descriptions and largely reported human misery.

A final category of factors which undermine or prevent nuclear activism might be termed "conflicts" (Milbrath & Goel, 1977). These include lack of resources (e.g., time, money, etc.), prior commitment to other causes, or attitudes which conflict with activists' goals.

To summarize, while concern about nuclear weapons and the potential for nuclear war appears to be growing, many psychologists have been more impressed by the lack of a greater public outcry. And, although many explanations have been offered, little research has attempted to go beyond opinion surveys at this point. Perhaps it should not be surprising that relatively few people have taken an active position on these issues for political scientists

generally find that low levels of political participation are the rule (Milbrath & Goel, 1977).

### Antinuclear Activism

Investigations of the characteristics of nuclear activists are relatively few at this point. Almost all have focused on antinuclear activism, and some have used antinuclear "sympathizers" rather than activists; only one study has included a sample which might resemble prodefense activism in some respects. This section will review this research and the factors that have been shown to be associated with these particular responses to the nuclear threat.

Fiske, Pratto, and Pavelchak (1983) hypothesized that the kinds of mental images people have about nuclear war, as well as the emotions accompanying these images might have a bearing on nuclear attitudes and political activity. In a stratified random sample of urban adults, they found that people identifying themselves as antinuclear activists did show differences in their images of nuclear war. Overall, abstract images were more common than concrete images, but activists were more likely to describe concrete rather than abstract images.

Examples of abstract images included general references to death, destruction, or to life after nuclear war. Concrete images included similar themes but were much more detailed. Images were judged to be concrete when they

included the death of specific people or vivid descriptions of injury, death, and efforts to survive.

Contrary to the expectation that antinuclear activists would have more negative emotions associated with images of nuclear war, this study found that affective referents were uniformly negative for both activists and nonactivists. In both groups, education showed a weak, positive correlation with the number but not the type of emotional associations. Factors such as race, gender, and occupation were not correlated with either activism, types of images, or emotions. Nor was there any relationship between activism and either age or education. Activists were found to have a somewhat higher level of general political participation, however.

In a study that examined two types of nuclear activism, Tyler and McGraw (1983) compared antinuclear activists with survivalists and a control sample of non-active adults. Subjects completed a questionnaire which asked about policy opinions (support for a nuclear freeze and use of nuclear weapons), worry about nuclear war, attitudes about the likelihood, prevention, and survival of nuclear war, and efficacy (i.e., belief in the ability to influence political decision-making).

Compared to the control group, antinuclear activists were more likely to support a nuclear freeze, to reject the use of nuclear weapons, to worry about nuclear war, and to make higher estimates of its likelihood. Antinuclear



activists also expressed a higher sense of efficacy, felt a moral responsibility for their activism, and believed that while nuclear war is preventable, it is not survivable in a meaningful sense.

While agreeing with the antinuclear activists that the risk of nuclear war is high, the survivalist group did not view it as preventable. They did, however, believe it to be survivable with appropriate preparation. In general, this group supports a strong nuclear posture, believes the use of nuclear weapons may be justifiable, and scores low on measures of political efficacy.

Locatelli and Holt (1986) were interested in Lifton's construct psychic numbing. They compared college students who were active in antinuclear organizations with nonactivist students who were sympathetic to antinuclear policies such as a nuclear freeze. These two groups were compared according to feelings of political efficacy, political powerlessness, perception of nuclear threat, and emotional responses to the television movie The Day After which dramatizes nuclear war.

The researchers reasoned that psychic numbing should be negatively associated with good mental health and that activists would be less prone to emotional numbing than nonactivists. The critical variable in this regard was the kinds of emotional reactions subjects reported after watching The Day After. Contrary to the expectation that activists would report more emotional reactions this was

not the case. The only emotion significantly more likely to be reported by nonactivists was a feeling of helplessness. From this the authors concluded that there is no evidence that psychic numbing is widespread. Other findings were that political efficacy is unrelated to activism, but that political powerlessness (negatively correlated) and perceptions of threat (positively correlated) are related.

The final study reviewed here investigated the relationship of threat perception and efficacy in support for antinuclear activism and examined Protection Motivation Theory as a model for predicting activism (Wolf, Gregory, & Stephen, 1986). Protection Motivation Theory predicts that fear-arousing messages will promote self-protective behaviors on the basis of judgements about threat and efficacy. Threat is operationally defined as a function of the likelihood and severity of an event and is measured by separate judgements of each, so that an event judged to be unlikely or not severe would be less likely to evoke a self-protective response than an event estimated to be both likely and severe.

In a similar fashion, efficacy is a function of two types of judgements. The first, termed self-efficacy, is one's belief that he or she is capable of performing a particular coping response. The second, response-efficacy, is the belief that a given response will effectively prevent an unwanted outcome. In this model, efficacy will

be highest when a person judges that he or she is able to perform a given activity and when that activity is believed to be effective. Efficacy will be low whenever a person doubts the effectiveness of a given action or does not believe he or she can perform it satisfactorily.

Protection Motivation Theory was developed as a model to explain the willingness of people to alter health or safety habits such as quitting smoking or wearing seatbelts (Wolf, et al., 1986). Implicit is the notion that fear (threat) alone is not sufficient to inspire behavioral change. While alterations in long-standing health behaviors are unlikely to occur without a reasonable level of fear or threat, it is also important for people to believe that a recommended course of action will be effective in reducing the threat and to believe that they can successfully follow that course of action. Thus, the motivation to engage in a particular activity (such as quitting smoking) will be highest when people are convinced that ill-effects are both likely and severe and when they believe that they can successfully follow a course of action that will effectively mitigate the hazard.

Reasoning that this model might be useful in predicting responses to the threat of nuclear war, Wolf and her colleagues devised an experiment to test it. College students completed questionnaires before and after the movie The Day After. Pre-test questionnaires asked about attitudes and emotions pertaining to nuclear war, and asked

subjects to make estimates of the probability and severity of nuclear war. Following the televised drama a post-test repeated pre-test measures and added questions about response efficacy (i.e., efficacy of various actions often used by antinuclear activists designed to reduce the probability of nuclear war), self-efficacy (perceived ability to engage in those activities), and the expressed intention to become involved in efforts to reduce the probability of nuclear war (behavioral intention).

Results showed no changes between pre-test and post-test for either those who watched or did not watch the movie. Viewers differed from non-viewers, however, by affirming greater intention to engage in nuclear war prevention activities. Finally, expressed intentions to engage in antinuclear activities were found to be highest when both threat measures (severity and likelihood of nuclear war) were judged high, and response efficacy was more strongly correlated with behavioral intention than self-efficacy. The best overall predictor of behavioral intention to work to prevent nuclear war was response efficacy.

Each of these studies has a number of strengths as well as the weaknesses that efforts to investigate new territory always have. Reliance on convenient samples, questionnaire data, and measurement instruments with unknown validity and reliability are unfortunate, but sometimes unavoidable in preliminary investigations of this

nature (cf., Fiske, 1987). From a methodological standpoint, the studies by Fiske and her associates (1983) and by Tyler and McGraw (1983) are the strongest. Fiske, et al., conducted random phone interviews and appeared to obtain a representative demographic sample of adults in a large urban community. Those identifying themselves as anti-nuclear activists were compared to the majority respondents.

Tyler and McGraw examined two types of behavioral responses to the nuclear threat; antinuclear activists and survivalists were compared with a control group. Although they may share important behavioral and attitudinal characteristics with other types of nuclear activists, survivalists do not meet the criteria for activism as defined in the present study. That is, their primary goals do not include efforts to influence public thinking or political decision-making about nuclear issues.

Locatelli and Holt (1986) surveyed college students, comparing those identified as antinuclear activists with antinuclear sympathizers (nonactivists supportive of certain antinuclear policies). Their thesis that nonactivists would demonstrate reduced emotional reactivity (psychic numbing) to a dramatization of nuclear war was not supported and suffered perhaps from a sampling population that was too narrow. It may be that the formation of firm nuclear policy opinions precludes the degree of psychic numbing the authors expected to find among nonactivists.

Another possibility is that the television dramatization was sufficiently compelling to overcome the emotional resistance described by Lifton's construct. Still, the comparison of activists with sympathetic nonactivists is a potentially useful way to clarify the motivational bases of activism over and above particular policy opinions.

In some respects the most theoretically appealing study was done by Wolf and her colleagues (1986). Although they did not actually investigate activists, they attempted to extend a theoretical model developed in another area to an understanding of nuclear activism. A shortcoming of this model is that it may not predict actual behavior; however, it seems to predict a motivational predisposition (aka behavioral intention) to perform certain self-protective coping responses. The Protection Motivation model predicts that intentions to engage in self-protective behaviors are a function of the threat induced by a fear arousing message and the perceived efficacy of available coping responses.

In Wolf's study the fear arousing message was a fictional television account of nuclear war. Although appraisals of threat and efficacy were positively correlated with viewing the dramatization and with behavioral intentions to engage in actions to prevent nuclear war, flaws in the design prevented a complete test of the model. The foremost problems were that subjects were not randomly assigned to viewer and non-viewer groups

and behavioral intentions were measured only on a post-test. It seems likely that those most inclined to participate in war-preventing activities would also be most inclined to view the movie. Despite these shortcomings, this study is useful for the analysis it offers about the relationship between perceptions of threat and efficacy, and the responses which follow from those perceptions.

### Summary

It is difficult to generalize from so few studies and ones which differ as these do; however, a number of tentative conclusions may be drawn. Antinuclear activists appear to have more concrete mental images of nuclear war (Fiske, et al., 1983) and to feel more threatened by its possibility (Locatelli & Holt, 1986; Tyler & McGraw, 1983; Wolf, et al., 1986). Antinuclear activists also feel more efficacious about preventing nuclear war (Tyler & McGraw, 1983; Wolf, et al., 1986), but no more efficacious about the political process than nonactivists (Locatelli & Holt, 1986) although they may be somewhat more politically active in general (Fiske, et al., 1983). Finally, antinuclear activists do not seem to be more emotional about nuclear issues than the general public (Fiske, et al., 1983), but they may be less prone to feelings of helplessness (Locatelli & Holt, 1986).

It is not yet clear whether antinuclear activists are more radical in their policy preferences than the general

public; Fiske (1987) believes they are not, while Tyler and McGraw (1983) find some support that they are. It is clear, however, that prodefense activists disagree with many of the policy positions advocated by antinuclear groups. Beyond this, little can be said about prodefense activists though they may share certain attitudinal similarities to survivalists who make relatively high judgements about the probability of nuclear war and feel less efficacious than antinuclear activities (Tyler & McGraw, 1983).

#### The Psychosocial Correlates of Nuclear Activism

In order to arrive at a more complete understanding of the motivational and cognitive factors which contribute to nuclear activism, the present study has focused on estimates of threat posed by nuclear war, and several measures of efficacy. This section examines these variables in greater detail in order to develop the hypotheses that are the subject of this study.

##### Threat

In terms of the psychological factors which promote nuclear activism, estimations of threat are consistently associated with antinuclear activism. Whether measured as the amount of worry (Tyler & McGraw, 1983), concern (Locatelli & Holt, 1986), probability of nuclear war (Tyler



& McGraw, 1983; Wolf, et al., 1986), severity (Wolf, et al., 1986), chances of survival (Tyler & McGraw, 1983), or the specificity of mental images of nuclear war (Fiske, et al., 1983), people who feel most threatened by nuclear war seem most likely to engage in antinuclear efforts.

To what extent appraisals of threat also play a role in prodefense activism is not yet clear. Because prodefense activism has not been examined previously, this study has tentatively assumed that prodefense activists share certain important characteristics with survivalists in terms of the ways they appraise the threat of nuclear war. Like antinuclear activists, survivalists believe the likelihood of nuclear war is high; unlike antinuclear activists, however, they believe that nuclear war is survivable.

The distinction that the probability of nuclear war can be judged high while its severity may be judged relatively low parallels the appealing formulation by protection motivation theorists (Wolf, et al., 1986) that perceptions of threat are based on independent but interactive appraisals of an event's probability and its severity. Threat appraisals will be highest when both probability and severity are judged high. If survivalists exemplify prodefense activists in this respect, the protection motivation model may be extended to provide an understanding of prodefense activism as well as antinuclear activism.

Following this reasoning, the present study has measured probability and severity judgements separately. Relevant hypotheses are that both antinuclear and pro-defense activists are motivated in part by their greater estimations of the probability of nuclear war and that they will diverge on estimates of the severity of nuclear war. Specifically, it is hypothesized that both prodefense and antinuclear activists will make higher estimations of the probability of nuclear war than their nonactive counterparts (i.e., those who advocate either prodefense or antinuclear policies but do not actively lobby for their support). Secondly, it is hypothesized that antinuclear activists will make higher estimates of the severity of nuclear war than will prodefense activists.

If judgements about the probability of nuclear war are critical to an active behavioral response to the nuclear threat, we still do not have an explanation for why people differ in their estimates of probability. Research into the ways that people make probabilistic judgements shows that most do very poorly in assessing the likelihood of even mundane events (Anderson, 1980). Psychologists have identified a number of heuristics and biases people use in judging probability (Kahneman, Slovic, & Tversky, 1982; Kahneman & Tversky, 1982) and have found that even knowledgeable experts succumb to these biases (Anderson, 1980; Kahneman, et al., 1982). In truth, no one knows whether a large-scale nuclear will occur, and no one can

precisely judge its probability. However, to the extent that people do seem to make judgements of this kind, and to the extent that those judgements play a role in nuclear activism, it would be useful to know more about how they are made.

Studies of responses to stress indicate that judgements of threat are complex and dynamic (Lazarus & Launier, 1978). In their model describing how people respond to stressful or threatening events, Lazarus and Launier emphasize the role of two kinds of cognitive evaluations they call "primary" and "secondary" appraisals. These terms are somewhat misleading and do not imply relative importance or a temporal relationship (p. 306).

Primary appraisal is an evaluation one makes of the significance of an event in terms of one's wellbeing. Such appraisals range from irrelevant to benign-positive to stressful (p. 302-303). Stressful appraisals can be further classified as those that have already happened (harm/loss), those that are anticipated (threats), or those that are viewed as an opportunity for mastery or gain (challenges).

Secondary appraisal is an evaluation of the resources and options one can mobilize to cope with stress or threat. Secondary appraisal influences not only the activities (e.g., information seeking or behavior change) of the person under stress, but it also influences primary appraisal processes (p. 306). For example, if one believes

he or she is well-equipped to deal with an event, that event may be viewed as irrelevant or even positive. Another person, based on a different assessment of available resources, may feel very threatened by a similar situation.

The importance of this, for our purposes, is that estimates of threat are not independent judgements. Rather, they depend to some extent on the kinds of responses people believe they can legitimately make. When options are few, or are constrained in some way, an objectively dangerous circumstance may not be subjectively viewed as harmful or threatening. An example is the oft-heard statement: "There's really nothing I can do so I might as well not think/worry about it." On the other hand, the availability of resources and response-options makes it more likely that a judgement of threat will be made and corrective action taken.

Lazarus and Launier's model offers a possible explanation for the differential estimates of threat people make about nuclear war. It predicts that people are more willing to appraise nuclear war as threatening when they believe they have reasonable coping strategies available to them than when they do not. This model dovetails with observations that have been made about general political behavior and nuclear activism with respect to efficacy.

## Efficacy

One factor that is consistently associated with political participation beyond the simplest level is efficacy (Milbrath & Goel, 1977). Efficacy has also been related to nuclear activism in some studies (Tyler & McGraw, 1983; Wolf, et al., 1986), but not in others (Locatelli & Holt, 1986).

A general definition of efficacy is the belief that one is capable of wielding influence (Milbrath & Goel, 1977). For research purposes efficacy is usually defined more narrowly as the belief that one is capable of influencing political decision-making (Milbrath & Goel, 1977), the belief that certain activities would be effective (Wolf, et al., 1986), or the belief that one is capable of carrying out certain activities (Wolf, et al., 1986). Again, Protection Motivation Theory offers a more precise explanation of the kinds of judgements that contribute to a sense of efficacy (Wolf, et al., 1986). Response-efficacy is the belief one has about the effectiveness of particular behaviors or activities; self-efficacy is the belief about one's capacity to perform these behaviors.

Two studies found a strong positive relationship between efficacy and activism, another did not. The differences appear to be a function of how efficacy was defined and measured in each case. The study that found no relationship (Locatelli & Holt, 1986) used an instrument

designed to measure beliefs about the responsiveness of the political system to individuals. Studies that found a positive relationship inquired about the viability of particular activist-related behaviors. Tyler and McGraw found that when people believe that ordinary citizens can contribute to preventing or surviving nuclear war, they are more likely to engage in those activities. In their study Wolf and her associates did not study activists per se, but they found that people are more motivated to engage in antinuclear activities when they believe that those actions are likely to be effective (response-efficacy) and when they believe they are able to perform those activities (self-efficacy).

The relationship between efficacy judgements and nuclear activism has been directly addressed in the present study. As others have noted (cf., Milbrath & Goel, 1977; Tyler & McGraw, 1983; Wolf, et al., 1986), both general political activism and antinuclear activism presuppose a political system that is responsive to direct citizen input. Following the example of Wolf, et al., this study will measure self-efficacy and response-efficacy separately. Self-efficacy is defined as an individual's belief in the responsiveness of the social and political environment to lobbying efforts by concerned and committed individuals. Response-efficacy is defined as belief in the effectiveness of specific strategies typically employed by grassroots political movements.

The general expectation is that nuclear activists, like other types of political activists will score higher on measures of efficacy than nonactivists. The question arises then whether antinuclear activists and prodefense activists will demonstrate similarly high levels of efficacy. Professor Rambo (personal communication) has argued that prodefense activists may show higher levels of response-efficacy because the prodefense position is more nearly in the political mainstream than the policies favored by antinuclear groups.

Since the end of World War II, the overwhelming political and public sentiment has favored parity, if not superiority, over the Soviet Union in nuclear weaponry. Simply stated, national security has been equated with the possession and willingness to use massive numbers of nuclear weapons. Only recently have some begun to challenge this orthodoxy by questioning whether more nuclear weapons actually provides greater security. The general concensus among antinuclear activists is that they do not.

The greater point, however, is the extent to which each of these two activist camps believes that public sentiment and the political system will be receptive to their own viewpoint on national security. It may be that recent breakthroughs in U.S.-Soviet relations and arms negotiations between the superpowers have buoyed expectations among antinuclear activists about their access

to and influence upon the political dialogue. A realistic appraisal might find such a conclusion premature, however. The strategy of strong nuclear deterrence capabilities has prevailed for nearly a half-century, the rationale being that a strong military defense insures security. The logic is both simple and appealing: If you are strong, no one will attack you. Furthermore, it stands within a centuries-old tradition of political thinking that a strong, well-armed military deters aggression (cf., White, 1968).

Changing this type of thinking, as many antinuclear activists hope to do, will be a long, uphill battle, and one, that if appraised realistically, might chasten antinuclear activists about their prospects and result in somewhat lower levels of efficacy. Specific hypotheses regarding efficacy were that nuclear activists would demonstrate greater beliefs in self and response efficacy than their respective nonactivist counterparts. Further, it was expected that while both antinuclear and prodefense activists would report similarly high levels of self-efficacy, prodefense activists would express higher levels of response-efficacy than antinuclear activists.

#### Purpose of the Study

The present study attempts to provide a more complete understanding of the motivational factors which lead some people to make an active commitment to nuclear issues. Of



particular interest were those individuals who have made the decision to ally themselves with others and with organizations which champion particular nuclear and defense policies i.e., prodefense and antinuclear activists. This study builds on and extends prior research in a number of ways: First, unlike several of the previous studies, this one sampled from a number of organizations and included only those activists who have made a substantial personal commitment to their respective causes. Secondly, activists were compared on several measures with people who held similar views, but who were only nominally affiliated with nuclear organizations. Third, prodefense proponents have been studied for the first time. And finally, in addition to questionnaire data, each subject was personally interviewed in order to get a more complete understanding of his or her opinions and motivations.

Previous research, though limited, indicates that perceptions of threat and efficacy are fundamental to an activist posture. The most precise formulation of these variables derives from Protection Motivation Theory (Wolf, et al., 1986) and from the work of Lazarus and Launier (1978). Protection Motivation Theory states that each is a function of two separate judgements: Estimations of threat are composed of estimates of probability and severity, while efficacy is composed of judgements of self-efficacy and response-efficacy. Moreover, according to the model proposed by Lazarus and Launier, threat is dynamically

related to efficacy. When people believe their options are few (low efficacy) they make lower judgements of threat. When options are available (high efficacy) judgements of threat are made more readily.

As yet, neither of these models has been applied to nuclear activism. Lazarus and Launier developed a general theory of adaptation from research unrelated to political activism. Wolf and her colleagues did not study nuclear activists directly, but found that subjects making higher estimates of both threat and severity were more likely to indicate intentions to engage in some type of nuclear war prevention activity. This study investigated the relationship of these variables to two types of nuclear activism.

With the exception of Tyler and McGraw (1983) no other study has investigated prodefense activism and it is not at all clear that the survivalists queried by Tyler and McGraw are truly representative of a pro-defense posture. Although they can be counted among those who have made an active behavioral commitment to the nuclear threat survivalists are few in number and do not lobby for particular nuclear policies. Their efforts are primarily confined to preparing for their own survival in the event of nuclear war. In contrast, prodefense activists represent a legitimate, albeit small, political movement advocating particular solutions to the nuclear threat. Generally speaking, survivalists do not view political

action as an effective mechanism for change (Tyler & McGraw, 1983). The present research examined both prodefense and antinuclear activists, comparing them with one another and with subjects who favor similar policies but who are not activists.

Because so little research has been done in this area and because in no previous study did investigators actually talk with subjects about their beliefs, interviews were seen as a potentially valuable way to explore new ground. In the present study the principal hypotheses were measured with a standard questionnaire, following which each subject was interviewed in order to corroborate the questionnaire data and to provide an opportunity for subjects to reveal unanticipated information bearing on their motivation for nuclear activism.

### Hypotheses

1. It is predicted that both prodefense and antinuclear activists will make higher estimations of the probability of nuclear war than will nonactivists.
2. On judgements of the severity of nuclear war, those by antinuclear activists will be highest and those by prodefense activists will be lowest while nonactivists will make intermediate judgements.
3. Activists will make higher appraisals of personal, political and response efficacy than nonactivists.
4. Prodefense activists will make higher appraisals of

response efficacy than antinuclear activists.

5. Activists will report greater personal concern and make higher estimates of public concern about nuclear war than nonactivists.

## CHAPTER III

### METHOD

A number of important events took place in the several months during which this study was being developed and the data was gathered. Many of these events were topically related to issues addressed in the study and had a substantial influence on those who volunteered to participate. It may be helpful, therefore, to briefly recount some of these occurrences in order to place this investigation in its appropriate historical context.

The months preceding the period of data collection (which began in October, 1988 and ended in April, 1989) were full of news reports about changes within the Soviet Union, superpower summit meetings and arms reduction talks. Secretary General Gorbachev had begun to implement a number of domestic proposals referred to collectively as glasnost (openness) and perestroika (restructuring) and the Soviets announced they would withdraw their troops from Afghanistan by February, 1989 (which they did). Mr. Gorbachev and President Reagan met in May, 1988 and again in December to discuss ways to improve U.S.-Soviet relations and to reduce nuclear armaments.

The first of these arms treaties, the Intermediate

Nuclear Forces (INF) accords was negotiated early in 1988 and ratified by the U.S. Senate in time to be signed during Mr. Gorbachev's visit to Washington in December of that year. The INF agreement required the U.S. and the S.U. to withdraw and destroy a class of intermediate-range missiles sited in Europe. Even before INF was signed, a host of other arms proposals were being discussed, including limiting the number of strategic (i.e., long-range) and cruise missiles, withdrawing troops from Europe and the Far East, and abandoning anti-missile and anti-satellite programs such as the Strategic Defense Initiative (SDI).

All-in-all, this was a period in which the superpowers seemed to be forging a new relationship and the more adventurous were beginning to speculate about the end of the Cold War (Krauthammer, 1988). Almost weekly there were new proposals, counter-proposals, signs of hope and warnings to be cautious. It was in this context that this study was completed. The people who participated in this study, perhaps more than the average American, followed these events closely and throughout the interviews they made frequent references to these and related occurrences.

### Subjects

Subjects were 60 adult men and women recruited from the membership roles of political organizations active in the metropolitan area of a large Western city. Organizations were chosen because they were primarily or

substantially involved with issues of nuclear and defense policies. In most cases these activities involved either political lobbying on behalf of particular policies, public education, or both.

Subjects were classified into one of four groups on the basis of their attitudinal position (Prodefense or Antinuclear) and according to their level of organizational participation (Active or Nonactive). Attitudinal position was evaluated by a set of items in the questionnaire which measured subjects' support for particular policies deemed to be representative of either a prodefense or antinuclear posture. To be included in the research, prodefense subjects were selected if they endorsed two of three items on the questionnaire in favor of SDI, civil defense, or a strong nuclear deterrence. Similarly, subjects in the antinuclear groups were required to endorse two of three questions supporting either nuclear arms treaties, a "no first use" policy, or a mutual freeze on the testing and deployment of nuclear weapons. In the large majority of cases, subjects in each category registered support for all three of the classification questions.

Frequency of group participation was used to evaluate the individual's commitment to the cause of either the antinuclear or prodefense position. Depending on their level of participation subjects were judged as either Active or Nonactive. To be included in the Active groups, subjects must have attended or participated in at least

three organizational events in the preceding six months. This minimum criteria was easily exceeded by all subjects in the active groups. In most cases these subjects were very involved in their groups' projects and participated in at least one event or activity per month. In many instances Active subjects worked on a weekly or even daily basis to promote their groups' efforts. Subjects in the Nonactive or sympathetic groups were only nominally involved with nuclear issues although, according to the attitudinal criteria, they were generally well-informed and had strong opinions on these issues. In most cases they did little more than maintain group affiliation although many were actively involved in other political and parapolitical organizations such as local and state political parties, and advocacy groups concerned with issues such as womens' rights, abortion, education and the environment.

To summarize, the two major classification variables were Position (Prodefense or Antinuclear) and Activity (Active or Nonactive). Subjects were assigned to one of four groups on the basis of their attitudinal position and their level of commitment to that position. Hence, four groups of 15 subjects were constructed: Antinuclear Activist, Prodefense Activist, Antinuclear Nonactivist, and Prodefense Nonactivist. The ages of subjects ranged from 19 to 78 years with a mean age of 47.4 years. By groups, mean ages were 44, 47, 50, and 49 years for Antinuclear Activists, Antinuclear Nonactivists, Prodefense



Activists, and Prodefense Nonactivists, respectively. The demographic characteristics of subjects by group are summarized in Table 1.

An effort was made to include approximately equal numbers of men and women in the study even though some of the groups from which subjects were recruited did not reflect an equal gender balance. For example, it was found that men comprised the large majority of members among the prodefense groups; among antinuclear organizations men and women were approximately equal although, overall, women tended to be more active than men. For the purposes of this study it was judged more important to examine the views of men and women equally rather than to reflect the true membership of these organizations. Hence, subjects were selected in a way to achieve similar numbers of men and women in each category without regard to their actual distribution in targeted organizations. Overall, 33 men and 27 women were interviewed. Prodefense organizations contributed 17 men and 13 women while 16 men and 14 women were recruited from antinuclear organizations.

No effort was made to control for socioeconomic differences such as education or occupation. Rather, these factors were simply tabulated for each subject and by group. It is not known to what extent these factors are representative of the membership of the larger organizations from which subjects were drawn. As can be seen from Table 1 no subject had less than a high school

education and all but four subjects had pursued college or technical education beyond high school. Substantial differences in both education and occupation can be seen, however. More than half the subjects in the antinuclear groups had earned postgraduate degrees while 2 of 30 subjects in the prodefense groups had postgraduate degrees. Similarly, professional occupations were represented more frequently in the antinuclear groups than in the prodefense groups.

Information on political party affiliation and liberalism-conservatism has also been included in Table 1. As can be seen, most antinuclear subjects identify themselves as Democrats while most prodefense subjects belong to the Republican party. The majority of those who are listed as "Other" identified themselves as Independents. Among antinuclear subjects almost two-thirds view themselves as liberal or very liberal while 80% of prodefense subjects view themselves as conservative or very conservative.

To summarize, subjects were recruited from a number of organizations actively involved with issues of nuclear weapons and defense policies. Subjects were classified according to whether they held antinuclear or prodefense attitudes and according to their level of commitment to working on behalf of their beliefs. An effort was made to recruit approximately equal numbers of men and women. As a whole, antinuclear subjects were well-educated with more

than half holding postgraduate degrees; the majority were employed in professional occupations. Most antinuclear subjects identified themselves as liberal and were affiliated with the Democratic party. Prodefense subjects were somewhat less educated and fewer were employed as professionals. Most had some college education and 40% were college graduates. Prodefense subjects were slightly older, affiliated with the Republican party, and most identified themselves as conservative.

#### Procedure

Subjects were recruited primarily from the membership of various prodefense and antinuclear organizations. In a few cases subjects were recommended by others who had previously participated in the study. An important goal was to recruit subjects from as many organizations as possible in order to sample opinions as broadly as possible. Most of the antinuclear subjects were drawn from local chapters of national organizations such as Educators for Social Responsibility, Beyond War, SANE/Freeze, and the Union of Concerned Scientists. A smaller number of subjects were recruited from local or regional peace groups. Prodefense organizations tended to have fewer members and most were local rather than national. An exception was the High Frontier organization which lobbies for SDI and has a national membership. Local groups primarily work to build support for programs such as SDI,

civil defense, or a strong military.

Because of the greater number and size of available antinuclear organizations, the prospective pool for subjects in these groups was quite large and far larger than the pool of subjects belonging to prodefense organizations. The size of the study was limited somewhat by the relatively small number of people meeting the criteria for inclusion in one of the two prodefense groups and by the decision to keep the size of each research group the same. Therefore, recruitment was stopped when 15 qualified subjects were enlisted in each group.

Prospective subjects were contacted, usually by telephone, and asked if they would be willing to participate in a survey about a variety of national security issues. It was explained that responses would be anonymous and confidential and that the time requirement would not exceed one hour. In response to those who wanted more information, the experimenter explained that he was doing research for a university degree and that he wanted to interview only people who were interested in policies and issues related to national security and who had made an effort to inform themselves about these issues. As a rule, those individuals most actively involved with either prodefense or antinuclear organizations were very receptive to participate in the study. Nominally active individuals sometimes expressed initial reservations about whether they were appropriate candidates. In these cases it was

explained that the questions weren't of a technical nature and that active group involvement was not essential. Prospective subjects were further reassured that they could withdraw at any time they desired. In most cases this explanation proved sufficient and only two people that were contacted declined to participate in the study.

Data were collected in two parts: a written questionnaire was followed by an oral interview. The questionnaire was preceded by written instructions which reiterated that responses would be confidential and anonymous (see Appendix A). With the subjects' permission, interviews were recorded to facilitate accurate transcription after which the tapes were erased and reused.

Information regarding the study's specific hypotheses was withheld from subjects prior to the study's completion because such information might have induced a response bias. There was no reason to believe that participation in the study would involve any risk to the well-being of the subjects and no adverse psychological reactions were reported. To the contrary, most subjects in each group reported that they enjoyed and appreciated the opportunity to think about and discuss these issues.

Typically, subjects were interviewed in their homes, at their places of business, or in a public location such as a restaurant. All interviews were conducted between October, 1988 and April, 1989. Following completion of the study, a summary of the research results was mailed to

interested subjects.

## Instruments

### Questionnaire

The questionnaire used a Likert-type format to measure each of the principal dependent variables. These variables are as follows: (a) probabilistic estimates of nuclear war under a variety of scenarios, (b) estimates of the severity of nuclear war, (c) general political efficacy, (d) personal resources, (e) response efficacy, (f) nuclear policy commitments, and (g) perceptions of concern about nuclear war. Each variable was assessed using multiple items designed to measure the hypothetical construct. In most cases these items have been used elsewhere (cf., Fiske, et al., 1983; Locatelli & Holt, 1986; Tyler & McGraw, 1983; Wolf, et al., 1986). In some cases the questions were rephrased to fit better within the chosen response format.

Following the example of Wolf, et al., (1986) subjective experiences of threat posed by the potential for nuclear war was hypothesized to consist of two independent components of probability and severity. Consequently, each was measured separately. The Probability Scale consisted of six items reflecting belief in the likelihood of various nuclear war scenarios. The Severity Scale consisted of two items reflecting belief in the likely consequences to self, family, and nation should nuclear war occur.

Efficacy measures were scaled separately for general political efficacy, personal resources, and response efficacy. The General Political Efficacy Scale was made up of three items tapping belief in the responsiveness of the political system to individuals. Personal Resources measured the extent to which subjects felt they had the time and financial resources to commit themselves to work in this area. The Response Efficacy Scale consisted of 11 items asking subjects to judge the overall effectiveness of strategies that are commonly used by grassroots political organizations including many nuclear activist organizations.

Questions regarding support or opposition to particular nuclear policies were assessed with a set of 16 items. These items were devised to reflect a number of contemporary policy positions frequently advocated by either prodefense or antinuclear organizations. Among these items were those used to to classify subjects into either Prodefense or Antinuclear groups. The final items on the questionnaire inquired about perceptions of general and personal concern about nuclear war and the extent to which subjects discussed these issues with other family members. The research questionnaire is reproduced in Appendix B.

### Interview

Interview items were designed to allow subjects to

elaborate further on issues raised in the questionnaire. Questions addressed the likelihood and consequences of nuclear war, thoughts and plans for protecting self and family in the event of nuclear war, attitudes toward the Soviet Union, and family dialogue about these topics. An effort was made to give subjects as much time as they wanted to discuss these issues and in general interviews were completed between 45 and 90 minutes. A standard list of questions was used for all subjects (see Appendix C); however, the order in which questions were asked varied somewhat from subject to subject in order to make the questioning flow more smoothly. In addition, many subjects were asked questions that were prompted by their responses and which were not a part of the standard protocol. The interview protocol was viewed as an outline of topics to discuss and each interview proceeded somewhat differently depending the willingness and interest of the subject to discuss each topic. Typical interviews have been reproduced in Appendix D.



## CHAPTER IV

### RESULTS

Research results have been summarized in two parts. The first section contains the quantitative analyses of the questionnaire scales and tests of the major hypotheses. Research scales were analyzed for group differences using a three-factor (Position x Activity x Items) analysis of variance with repeated measures on the third factor (Winer, 1971). Position has two levels: Antinuclear and Prodefense; the two levels of Activity are Active and Nonactive. The number of levels on the repeated factor, Items, ranged from 2 to 11 depending on the scale.

Treating the scale items as repeated measures has the advantage of allowing a more detailed item by item analysis when either a significant main effect or an interaction is observed for that factor. In these cases, Neuman-Keuls tests of individual comparisons have been performed to identify those items in each group that contributed most to differences that were obtained.

In those cases where tests of variance-covariance homogeneity indicated that the required conditions were not present in the data, the appropriate corrections were made using the Huynh-Feldt procedure. This procedure reduces

the degrees of freedom for the sums of squares and prevents an overly liberal alpha level for tests of significance.

In the second part of this section, the qualitative analyses of the interviews are reviewed.

### Quantitative Analyses

The Probability Scale asked subjects to rate the likelihood of nuclear war within different time periods and under different hypothetical scenarios. Contrary to the prediction that subjects in the Activist groups would make higher probability estimates than Nonactive groups, no such difference was found,  $F(1,56) = .01$ ,  $p > .93$ . However, for all items, probability estimates made by the Antinuclear groups exceeded those made by the Prodefense groups. A difference approaching statistical significance was observed as a function of Position,  $F(1,56) = 3.58$ ,  $p = .064$ , thus indicating that those who express negative sentiments toward nuclear armaments tend to perceive a greater likelihood of nuclear war.

Further analysis revealed a significant Position by Item interaction,  $F(4,220) = 2.54$ ,  $p < .05$ . This led to a simple effects analysis which found that Antinuclear groups made higher probability judgements on two of the six items. Antinuclear groups judged higher likelihood of nuclear war within one's lifetime,  $F(1,56) = 7.15$ ,  $p < .05$  and expected war to occur as a result of some type of accident or malfunction,  $F(1,56) = 9.66$ ,  $p < .01$ . Of all the scenarios

presented, nuclear war by the turn of the century was judged least probable by each group. (Although the groups did not differ significantly, mean scores were 3.13 for the Prodefense Nonactive group, 3.00 for Prodefense Active group, and 3.60 for each of the Antinuclear groups.) the scenario all groups judged most likely to lead to nuclear war was one in which the U.S. and the S.U. are drawn into a regional conflict initiated by non-superpower nations. On this item, group scores clustered between fairly likely and very likely. Again, groups were not significantly different; mean scores ranged between 4.13 for Prodefense Activists and 4.47 for Antinuclear Activists.

The greatest difference between respondents in the Prodefense groups and those in the Antinuclear groups was observed on the question about the potential for a technical accident to lead to nuclear war. This situation was judged to be fairly unlikely by Prodefense groups ( $M = 3.10$ ) and fairly likely by Antinuclear groups ( $M = 4.07$ ).

The Severity scale consisted of two items asking subjects to estimate the probability that they and their families and the U.S. as a nation would survive nuclear war. The hypothesis that antinuclear advocates perceive nuclear war to be more catastrophic than do those who favor a prodefense posture was supported,  $F(1,56) = 68.78$ ,  $p < .001$ . Subjects in the Antinuclear groups believe that survival of self/household and the nation is very unlikely; Prodefense subjects are much more optimistic and judge the

chances of survival to be fairly likely in both cases.

A second hypothesis about severity estimates predicted that Antinuclear Activists would judge severity highest followed by the Antinuclear Nonactivists, Prodefense Nonactivists, and finally, the Prodefense Active group. The predicted order of severity estimates was observed; however, Neuman-Keuls comparisons revealed that there was no significant difference between either of the Antinuclear groups or between either of the Prodefense groups. (Mean scores across Severity items was 5.10 and 5.06 for Antinuclear Activists and Antinuclear Nonactivists and 3.34 and 3.00 for Prodefense Nonactivists and Prodefense Activists, respectively. The difference between total group scores for the two Prodefense groups was 10 while the Antinuclear group scores differed by 1. In each case the necessary critical value was  $\alpha_{.95}(2,56) = 19.60$ .)

Several hypotheses were made regarding the concept of Efficacy. With regard to General Political Efficacy, Personal Resources, and Response Efficacy, it was hypothesized that Activist subjects would demonstrate greater efficacy than Nonactive subjects. Results supported the hypothesis for Personal Resources, but not for the other two efficacy constructs.

General Political Efficacy measured the extent to which subjects believe that individual citizens can influence national decision-making and the political process. For General Political Efficacy (GPE), no

difference was found between Active and Nonactive groups,  $F(1,56) = .28$ ,  $p = .598$ . However, there was a trend in the direction of greater GPE for Prodefense groups,  $F(1,56) = 3.45$ ,  $p = .068$ .

Personal Resources examined the extent to which subjects had the time and money to work on behalf of their beliefs about nuclear issues. Data support the hypothesis that people most actively involved in the work of their member organizations are more likely to feel they have the personal resources to support their work,  $F(1,56) = 28.93$ ,  $p < .001$ . A significant main effect for Items revealed that all groups perceived time to be more available than money,  $F(1,56) = 10.78$ ,  $p < .002$ .

Response Efficacy measured the degree to which subjects believe a variety of political strategies are effective in furthering organizational goals. Two predictions were made with regard to this construct. First, it was hypothesized that subjects in the Active groups would rate these political strategies as more efficacious than Nonactive subjects. Second, Prodefense Activists were predicted to evaluate these strategies more favorably than Antinuclear Activists. Neither hypothesis is supported by the data. No difference was found on the basis of Activity,  $F(1,56) = .45$ ,  $p > .05$ , and the mean evaluations for the Antinuclear Activist group and the Prodefense Activist were almost identical, 3.88 and 3.90, respectively. However, significant Position by Item

interaction,  $F(7,391) = 2.08$ ,  $p < .02$ , revealed that responses as a function of Position were not consistent throughout the scale. Simple effects analysis found greater belief in the efficacy of civil disobedience among the Antinuclear groups than among the Prodefense groups,  $F(1,56) = 9.16$ ,  $p < .01$ . All other strategies were judged similarly (moderately effective) by Prodefense and Antinuclear groups.

Next, two items queried the extent to which people can decrease the likelihood of nuclear war and the extent to which people can protect themselves from the adverse consequences of nuclear war. It was predicted that Antinuclear groups would be more optimistic about the former while Prodefense groups would be more optimistic about the latter. The expected Position by Item interaction was found,  $F(1,55) = 31.05$ ,  $p < .001$ ; however, simple effects analysis revealed that while Antinuclear Activists tended to be more optimistic about preventing nuclear war, there was no statistical difference between Antinuclear and Prodefense groups,  $F(1,55) = 1.33$ ,  $p > .05$ . There was, however, a large difference in the expected direction on the question concerning protection against the potential devastation of nuclear war,  $F(1,55) = 30.72$ ,  $p < .01$ . In sum, while both Antinuclear and Prodefense groups judge prevention to be a worthy strategy, Prodefense groups were slightly more favorable toward self-protection ( $M = 3.5$ ) than toward prevention ( $M = 3.2$ ). Antinuclear

groups, in contrast, support preventive efforts ( $M = 3.53$ ) but are very pessimistic about surviving nuclear war ( $M = 1.90$ ).

The last hypothesis examined perceptions of concern about nuclear war. Items asked subjects to estimate the level of concern about nuclear war among the general public, the frequency with which they personally think about nuclear war, and the extent to which they personally feel anxious. It was predicted that Active groups would make higher ratings in each area. However, the data do not clearly support this conclusion,  $F(1,55) = 2.28$ ,  $p = 1.37$ . Instead, there was a significant main effect for Position,  $F(1,55) = 6.59$ ,  $p < .01$  indicating that, overall, Antinuclear groups perceive greater public and personal concern about nuclear war than do Prodefense groups. This conclusion is tempered, however, by a significant Activity by Item interaction,  $F(2,97) = 3.44$ ,  $p < .05$ . The subsequent simple effects analysis found that those in the Activist groups think about nuclear war more often,  $F(1,55) = 4.23$ ,  $p < .05$  and tend to experience more anxiety,  $F(1,55) = 3.65$ ,  $p < .06$ .

The best way to interpret these results is to consider public and personal concern separately. While Antinuclear subjects perceive greater public concern about nuclear war than do Prodefense subjects, the activists in each camp report greater personal concern (thinking and worrying) than the nonactivists. Among the four groups, Antinuclear

Activists report the greatest amount of thinking and anxiety while Prodefense Nonactivists report the least. In each case, scores for Prodefense Activists and Antinuclear Nonactivists are nearly identical.

Finally, a group of questions dealt with specific policies or proposed policies relating to nuclear armaments. No specific hypotheses were made, but responses to certain items were among the criteria used to select research subjects. Policy items were analyzed individually using a 2 x 2 (Position x Activity) analysis of variance. All but 1 of 16 policies revealed a significant main effect for Position with F values ranging from 27.15 to 362.64 at p < .001. Antinuclear subjects favor or strongly favor mutual freeze, arms treaties, unilateral freeze, unilateral nuclear reduction, No First Use, decreased military spending, and bilateral reductions of both short and long-range missiles. Prodefense subjects favor or strongly favor SDI and ground based missile defenses, crisis relocation plans, shelters, strong nuclear deterrence, and increased weapons research. They are also in favor of bilateral reductions in long-range missiles, but less strongly than Antinuclear subjects. All groups strongly support proposals to reduce the transfer of nuclear technology to Third World and non-nuclear nations. Table 2 summarizes the mean scores of combined Prodefense and Antinuclear groups for each nuclear policy.



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Insert Table 2 about here  
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In summary, questionnaire responses were used to evaluate hypotheses about group differences. Contrary to expectation, Activist groups did not exceed Nonactive groups in estimations of the probability of nuclear war. A Position by Item interaction revealed that Antinuclear groups made significantly higher estimates on two Probability items. Severity of nuclear war, as measured by estimates of survival, revealed that, as expected, Antinuclear groups expect nuclear war to be more severe than Prodefense groups. It was also hypothesized that Activists would demonstrate a greater sense of efficacy as measured by three separate efficacy scales. Only in the case of Personal Resources was this hypothesis supported. In the other two cases, General Political Efficacy and Response Efficacy, no overall statistical differences were observed; however, there was a trend in the direction of greater belief in political efficacy by Prodefense subjects, and Antinuclear subjects were found to be more sympathetic toward civil disobedience.

Another hypothesis predicted that Antinuclear subjects would view prevention of nuclear war as more feasible while Prodefense subjects would see more value in protective measures. According to responses, Antinuclear and Prodefense groups did not differ on the feasibility of

preventive activities, but Prodefense groups were significantly more likely to believe in protective efforts. The final hypothesis predicted that those in the Activist groups would perceive a greater concern about the danger of nuclear war. Instead, however, Antinuclear groups were found to perceive greater concern on the part of the general public while Activists reported greater personal concern. The final set of items found large differences between the types of nuclear and defense programs supported or opposed by Prodefense and Antinuclear groups.

### Interview Results

After completing the questionnaires, each of the 60 research subjects was interviewed individually. Although no specific hypotheses were formulated with regard to the interviews, some of these questions parallel interest areas highlighted by the research questionnaire and it was expected that interview responses would generally support the questionnaire findings. An important reason for interviewing subjects was to provide the opportunity for them to discuss these issues in their own words, unrestrained by the questionnaire's topics or multiple-choice format. The primary reason for conducting interviews, however, was to gather information that could not have been anticipated in the questionnaire. Although research has begun to identify the motivational characteristics of nuclear activists it was anticipated

that interview data would reveal additional factors.

As noted previously, those in the Active groups were generally quite willing, if not eager, to volunteer for the study while many of those who were nominally active expressed mild initial reservations about their suitability for inclusion. As a rule, subjects in the Active groups seemed to articulate their positions more easily and usually provided greater detail in their responses. The probable explanation is that those who were most actively involved in their respective organizations were more likely to have thought through these issues before and may have been more comfortable and confident in expressing themselves. In fact, many of the activist subjects were experienced in speaking publicly on behalf of their own beliefs or for their organizations. Those in the Nonactive groups, on the other hand, were rarely more than nominally involved in either prodefense or antinuclear organizations and tended to give briefer, less specific responses.

At the conclusion of the interview, demographic information was gathered on each subject. In addition to the personal data which was reviewed earlier, information about organizational membership was also obtained. In most cases, subjects in the Active groups were very active while those in the Nonactive groups did little more than contribute financially or maintain affiliation. All activist subjects reported at least monthly involvement with some organizational project or activity, and most were

considerably more active. One-third reported daily or near-daily work on behalf of their group. One final difference was that Antinuclear Activists tended to have the longest history of organizational commitment with 13 of 15 reporting membership greater than 5 years. In every other group a few subjects reported a similar period of affiliation, but the majority in each case reported organizational membership of two years or less.

Interview results have been summarized separately for each question. The complete list of interview questions has been reproduced in Appendix C.

1. Why do you believe the likelihood of nuclear war is \_\_\_\_\_ by the year 2000? What leads you to this conclusion?

This question recalls the subject's answer to the first item of the research questionnaire (response options were not possible, very unlikely, fairly unlikely, fairly likely, very likely, and almost certain) and asks them to explain the basis of their estimations of nuclear war's probability. As noted earlier, responses to this and other Probability questions were divided on the basis of Position (Prodefense or Antinuclear) rather than Activity (Active or Nonactive).

Two-thirds of the subjects in each of the prodefense groups regard nuclear war as unlikely (i.e., fairly unlikely, very unlikely, or not possible) and the majority

of these rate it very unlikely. The remaining one-third view nuclear war as either fairly likely, very likely, or almost certain. Antinuclear groups, in contrast, were evenly split on estimates of the probability of nuclear war with half in each group rating it as likely and half rating it unlikely. In addition to the fact that a smaller proportion of antinuclear subjects regard nuclear war as unlikely, those who do rated it as somewhat less improbable than their prodefense counterparts. Whereas 16 of the 21 prodefense subjects who rated nuclear war as unlikely said it is either very unlikely or not possible, 12 of the 15 antinuclear subjects who view it as unlikely answered fairly unlikely.

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 Insert Table 3 about here  
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Table 3 summarizes the probability estimates for each group. It will be recalled, however, that these differences are not statistically significant and of all Probability items this was judged least likely by each group.

Of more interest are the explanations subjects gave for their beliefs about the probability of nuclear war. Among those (both prodefense and antinuclear) who view nuclear war as unlikely, there was substantial agreement that nuclear weapons are too destructive to use in military

combat. Moreover, these subjects believe that the leaders and citizenry of nuclear capable nations share this view and that the fear of nuclear war deters the use of nuclear arms. In addition, many antinuclear respondents reported feeling increasingly optimistic because of improving relations between the U.S. and the S.U. They are encouraged by what they feel is a growing public awareness of the potential for a catastrophic nuclear war and believe that government and military leaders in both nations are similarly convinced that the use of nuclear weapons would be folly. They implied an expectation that those in leadership positions will behave logically and rationally and used terms like "suicidal" and "unwinnable" to describe nuclear conflict. Prodefense subjects were not similarly encouraged by recent peace talks. They expressed grave misgivings about Soviet intentions and many stated that the S.U. believes it can achieve its objective of undermining the U.S. through subversion rather than resorting to direct aggression or war.

Greater diversity of opinion was reported by those subjects in all groups who view nuclear war as likely. Most of those in the prodefense groups base their judgements on an enemy, namely the S.U., they view as aggressive, hostile, and imperialistic. Many stated that the S.U. secretly believes it can win a nuclear war and that the U.S. would readily capitulate to a pre-emptive attack. Three subjects (all in the Prodefense Nonactive

group) based their judgement that nuclear war is likely on Biblical predictions of catastrophic wars. (Two of these judged nuclear war as almost certain; the other said very likely.)

Among antinuclear subjects who believe that nuclear war is likely, the most frequently cited reason was the potential for accidents, either through some type of technical malfunction, human error, misunderstanding, or miscommunication in time of crisis. Others were primarily concerned about the numbers of weapons in nuclear arsenals worldwide, nuclear proliferation in the Third World, and the potential for regional conflict.

2. If the U.S. became involved in a nuclear war, how do you imagine it might happen? What is the most likely scenario?

Although people were asked to choose the most likely scenario, many gave more than one answer. Interestingly, those who judged nuclear war to be unlikely were no less willing to pose nuclear war scenarios than those who judged it likely, though the latter offered more responses. Additionally, antinuclear groups produced somewhat more responses (n = 42) than did prodefense groups (n = 32).

For antinuclear subjects the dual possibilities of accident or regional conflict loom as the most likely causes of nuclear war and almost all mentioned one or both. The most detailed scenarios envisioned some combination of

the two. Antinuclear subjects fear that the superpowers might become entangled in a Third World conflict and, as tensions rise, the tolerance for error decreases as the possibility of misunderstanding or technical malfunction increases. (The Korean and Iranian airliners that were inadvertently shot down by the S.U. and the U.S., respectively, were recalled by several subjects as examples of the ways in which technical or command systems fail when tension and stress is high.) Several said they were even more concerned about major accidents in the Third World or the S.U. where safety mechanisms may not be as stringent. The possibility of terrorism was the third most frequently mentioned scenario by subjects in each antinuclear group.

Among prodefense subjects, Soviet aggression was cited as the most likely cause of nuclear war by a large margin. Two-thirds of those in the Prodefense Activist group and half of those in the Prodefense Nonactive group regard this as the most likely scenario. (Again, most of these subjects reject the idea that nuclear war is probable, but if it happens, they believe that Soviet aggression will be the trigger.) Subjects in both prodefense groups foresee the possibility of a surprise attack on selected U.S. and NATO military installations rendering the West unable to retaliate. The possibility of Third World or regional conflict precipitating a nuclear war was the second most often cited scenario in each group and accounted for almost one-third of responses. (In every group, the Middle East



is seen as the most troublesome region by far, but the Indian subcontinent, Asia, and South America were also identified as potential hotspots.) Accidents, which accounted for more than half the nuclear war scenarios related by antinuclear subjects, were of little concern to prodefense subjects. Technical malfunction or human error were mentioned by only one subject in each prodefense group.

These explanations are consistent with the results from the questionnaire where the possibility of regional conflict leading to nuclear war was judged the most likely scenario by all groups. Furthermore, the possibility of accidental nuclear war was one of the two scenarios on which Antinuclear and Prodefense groups differed significantly.

3. If the U.S. were involved in a nuclear war, what do you think the consequences would be for you and your family?

This question parallels the Severity Scale items on the questionnaire and as expected differences along attitudinal lines were marked in the responses subjects provided to this question. Antinuclear subjects in both groups anticipate a worst-case scenario and almost none expect they would survive. Prodefense subjects, on the other hand, believe that if nuclear war occurs it will be relatively limited and they are more optimistic about

personal survival.

Most prodefense subjects envision a nuclear conflict largely confined to a few key military bases and expect major population centers to be spared. This view holds that while the S.U. is committed to conquest it is not interested in destroying the U.S. Rather, its objectives are to overthrow the U.S. government and take control of its resources, both natural and commercial. Thus, most prodefense subjects believe that a large-scale nuclear attack on the U.S. would be counter-productive to Soviet goals and very few accept the notion of an extended or "global" nuclear war.

Concerning the personal consequences of nuclear war, differences were observed between the Prodefense groups, however. Activists appear to be more confident about survival than their Nonactive counterparts. By a large majority (n = 11), Prodefense Activists believe they will survive nuclear war. (Four in this group have actually made extensive survival plans for themselves and their families.) In contrast, only one-third of Nonactivists (n = 5) expressed confidence about survival. Slightly more than half (n = 8) said they didn't know or that the consequences would depend on how close they happened to be to the missile targets. (These subjects do not believe that a large scale war will occur, but wonder if strategic sites in their area will be targeted and jeopardize their lives.) Beyond personal survival, prodefense subjects

anticipate a variety of difficulties in the wake of nuclear war. Most expressed concern about radioactive fallout, food shortages, economic hardship, and political uncertainty. Many expect they'd have to relocate to less contaminated areas.

Antinuclear subjects are much more pessimistic about nuclear war. They do not believe it would end quickly or be limited to selected military targets. All but one subject in these two groups described nuclear war in catastrophic terms. They firmly believe that if nuclear war begins it will be an all-out war; nations will launch their missiles at the first sign of conflict rather than risk having them disabled by enemy missiles. These subjects talk about global effects, nuclear winter, and speculate that human civilization may end, if, in fact, all biological life is not destroyed. When pressed, antinuclear subjects are willing to allow that short-term survival may be possible with preparation or luck, but most do not believe long-term survival is probable. Moreover, they do not believe it would be desirable; in fact, most said they wouldn't want to be among the survivors of nuclear war considering the aftermath they envision.

4. Have you ever considered the possibility of nuclear war when making decisions about the future, such as where to live, etc.?

This question was included to elicit past concerns

about nuclear war, concerns which might have affected past behavior. It was hypothesized that some individuals no longer anxious about nuclear war might have formerly been concerned enough to have made certain personal decisions on the basis of those concerns. The clause "such as where to live, etc." primed respondents to think in terms of decisions about personal survival and it was anticipated that more prodefense subjects would reply affirmatively.

In fact, this proved not to be the case. Only in the Antinuclear Activist group did a majority of subjects (n = 8) report that the possibility of nuclear war had affected past behavior in some way. Seven said that their concerns about the future were primarily responsible for their involvement in the cause of nuclear activism. The other subject reported having postponed parenthood and a career decision because of her uncertainty about the future. The remaining antinuclear activists replied that they did not regard the pursuit of personal safety as worthwhile or that they had not made any decisions based on concerns about nuclear war. The only other group in which a substantial number answered this question affirmatively was the Prodefense Activist group. Four of these individuals have or are currently constructing fallout shelters. Two other subjects reported that they had built shelters in the past, but are no longer concerned about nuclear war and have abandoned their shelters.

In the two groups of Nonactive subjects, only three

people reported decisions or behavior based on concern about nuclear war. One member of the Prodefense Nonactive group recently completed a fallout shelter. In the Antinuclear Nonactive group, two said career decisions had been made in part because of apprehension about the future. (One became a teacher in order to influence change in younger generations and the other said that the fear of nuclear war had undermined her enthusiasm for life and interfered with career planning.) The remainder of the subjects in these two groups (n = 27) said that nuclear war had never played a role in any decision about the future.

To summarize, concern about nuclear war prompted four people in the Prodefense Active group and one in the Prodefense Nonactive group to construct personal shelters. Each of these individuals believes that nuclear war is very probable but survivable with proper preparation. Two other subjects in the former group had once built shelters, but no longer feel they are necessary. Only in the Antinuclear Active group did a majority report having made important decisions (i.e., to become activists) based on concern about nuclear war. Finally, two Antinuclear Nonactive subjects indicated that nuclear war had affected their career plans in some way.

5. Have you given any thought or made any preparations for the safety of yourself and your family in the event of nuclear war?

Not surprisingly, responses to this inquiry were divided along Prodefense and Antinuclear lines. For those who advocate an antinuclear position, surviving nuclear war is viewed as a very improbable, even undesirable, outcome. They unanimously reject survival planning of any type and use terms like "futile," "kooky," "naive," and "misguided" to describe either personal survival plans or national civil defense proposals. In contrast, half those in each prodefense group admitted giving some consideration to specific plans. Most commonly mentioned were storing food and other supplies, building a shelter, and evacuation to a safer area. Only five, however, are currently making concrete preparations (i.e., constructing or stocking shelters).

Those prodefense subjects who have made no survival or safety preparations (n = 25) base their reasoning on a different rationale than antinuclear subjects. Most simply believe that nuclear war is too unlikely to warrant such effort, and, if it did happen, they generally do not accept the catastrophic scenarios often used to portray nuclear war. Follow-up questions revealed that in most cases these subjects view "survivalism" with a measure skeptical amusement.

6. What, if anything, can the average person do to protect himself or herself from the effects of nuclear war?

On this item, antinuclear subjects were again

unanimous that the only real protection from nuclear war is prevention. They view defensive or protective measures as a "frivolous" or "misguided" use of resources. Many would allow that personal or collective efforts may provide short-term survival for small numbers of people, but they regard long-term survival as very unlikely in the wake of environmental calamity, nuclear winter, and social collapse.

A greater diversity of opinions was reported by the members of the prodefense groups. Among Prodefense Activists, half mentioned some type of personal effort (e.g., building shelters, storing supplies, etc.) and half advocated public or political activities (e.g., supporting a strong military, lobbying for civil defense programs or SDI, etc.). Many of the latter persuasion view personal survival efforts as useless. (In this view, civil defense is seen as less valuable to maintain lives than as a deterrent to outside aggression. The rationale is that aggression is minimized against nations that are well prepared to defend themselves against attack. Because of their emphasis on deterrence and involvement in the political process to promote these programs these subjects share somewhat similar views to those in the antinuclear camp, namely that prevention, rather than self-protection is the surest way to avoid nuclear war. They differ, however, on what the best methods of prevention are.)

This question revealed somewhat greater differences

between Prodefense Activists and Prodefense Nonactivists than most others. Many Nonactivists (n = 9) also mentioned some type of individual effort as potentially useful, but their recommendations were less specific and more tentative (e.g, "go to a bomb shelter if you can find one," "a bomb shelter might help," "move to the country," "be a survivalist"). In fact, most said they found these strategies unappealing and couldn't see themselves doing such things. A second difference between the prodefense groups was that where half the Activists advocated political lobbying to promote deterrence programs, only two Nonactivists mentioned this approach. The remaining Nonactivists (n = 4) said that people could do little or nothing to protect themselves. Prodefense Nonactivists, then, seem to be less confident about individual efforts, either to promote personal survival or through involvement in the political process.

7. What, if anything, can the average person do to help prevent nuclear war from occurring?

Responses to this question were markedly different for Position (Antinuclear or Prodefense) and to a lesser extent for Activity (Active or Nonactive). All but one person in the Prodefense Active group had at least one recommendation for preventing nuclear war and many cited several. By a large majority, this group believes that a credible military deterrence is the most effective way to avoid



nuclear war. Almost unanimously they agree that political lobbying on behalf of a strong military is the best strategy, but interestingly, only two mentioned organizational membership as an effective vehicle to achieve these goals. Most cited specific programs such as SDI and civil defense which they regard as defensive, nonthreatening deterrents to aggression.

Prodefense Nonactivists, on the other hand, were less likely to view prevention as an objective to which the average person can contribute. More than half ( $n = 8$ ) said "nothing" or "very little" in response to this query. Those who did offer suggestions generally commended the value of deterrence programs, but without actually identifying how the average person could play a role. For example, instead of saying "Write your congressman and tell him we need SDI" (as many Activists did), Nonactivists tended to say things like "Support the military" or "Support SDI." Followup questioning revealed that few of these subjects had ever written to an elected official regarding defense-related policies. In other words, as with the previous question, while Nonactivists favor many of the same programs as the Activists, they seem to have less defined ideas about how to give that support.

On the antinuclear side, Activists and Nonactivists demonstrated a similar parallel. Activists generated an average of 3 suggestions each, nearly twice as many as the Nonactivists. Moreover, the strategies offered by

Activists were more specific. While Nonactivists tended to mention broad categories such as "political action," Activists recommended "learning about the political process," "working in a political campaign," "writing letters," and "lobby Congress." Nonactivists suggested "educating yourself and others"; Activists recommended studying world affairs, history, cultural differences, conflict resolution, learning to think critically, and learning to think globally. Many Nonactivists advocated group membership; Activists went into detail about the value of group involvement. They pointed out that groups provide opportunities to learn and grow, provide emotional support, serve as an antidote to hopelessness, and through collective effort make large projects feasible. Many activists also cited the need for personal change and offered examples such as "learning to resolve disputes peacefully within the family" and "recognizing how patterns of personal consumption affect the world economy."

8. In your own words, what kinds of nuclear and defense policies do you support and why?

As one would expect, Prodefense and Antinuclear groups are sharply divided about the kinds of policies they favor. Prodefense subjects are wary of the S.U. and insist on maintaining a strong and credible military to deter aggression. A large majority in both these groups would like to see some type of antimissile system (such as SDI)

implemented as quickly as possible. Repeatedly, Prodefense subjects appealed for SDI and civil defense programs which they believe would greatly enhance deterrence without threatening other nations. A total of four subjects (three Activists and one Nonactivist) said they could support reductions in nuclear weapons if they are bilateral and verifiable.

Virtually all the antinuclear subjects favor weapons reductions and decreased military spending. They view the weapons systems themselves as more dangerous than external military threats and offered many alternatives to the arms race. In many respects Antinuclear Activists and Nonactivists advocated similar proposals; however, these groups differed in at least two ways. First, Activists generated more recommendations and their proposals were more specific than those of the Nonactive group. For example, while all the Nonactivists supported weapons reductions, the Activists went further and offered many ideas they felt would facilitate or augment such reductions. They advocate the development of international institutions to oversee arms reductions and to gradually assume more responsibility for international security. Activists also cited a need for negotiations to reduce specific classes of weapons. They spoke about economic and social dangers of continuing the arms race and recommended a number of areas where they feel money could be spent better (e.g., housing, jobs, education, health care, etc.)

and many recommended programs that would retrain defense industry workers for nonmilitary employment.

The second major difference between Antinuclear Activists and Nonactivists is that unilateral reductions were advocated by only three Activists but were mentioned by nearly three-fourths ( $n = 11$ ) of the Nonactivists. Nonactivists repeatedly expressed frustration with the pace of peace talks and accused U.S. leaders of dragging their feet. They believe that the U.S. nuclear arsenal far exceeds what is necessary for deterrence and suggested that significant unilateral reductions could be made without jeopardizing national security. Those who favored unilateral reductions were asked to elaborate and in most cases suggestions were rather vague; however, there was an implicit notion of some minimum, but acceptable, level of deterrence far below current U.S. stockpiles. The most specific recommendations were for eliminating all but a small number of nuclear-capable submarines.

Although those in the antinuclear camp were often referred to as "unilateral disarmers" by Prodefense subjects, only one individual actually advocated unilateral disarmament. In every other case unilateral action was seen as a way to accelerate bilateral reductions. One subject even recalled Charles Osgood's 1961 GRIT proposal for stimulating bilateral reductions through selected unilateral initiatives, c.f., p. 13.

In contrast to Nonactivists' frustrations with the

pace of weapons reductions, many Activists expect significant arms reductions to be a long and tedious process. They, too, are impatient; however, many cited the substantial barriers that must be overcome before meaningful change can take place. Historical enmity, cultural, economic, and political differences, and competition for international standing were most often mentioned in this regard.

9. What kind of relationship would you like the U.S. to pursue with the Soviet Union?

Those in the antinuclear groups used words like "optimistic", "hopeful", and "exciting" to describe their feelings about recent U.S.-Soviet accords. Prodefense respondents, in contrast, were "suspicious," and "skeptical" of the S.U. and advised "extreme caution" in dealing with them.

Antinuclear subjects in both groups hope for a closer, if not "friendly," alliance between the superpowers. All expressed approval of Secretary General Gorbachev, of glasnost and perestroika, and hope for greater liberalization of Soviet society which they believe will offer unique opportunities for peace and arms reductions. (A note of caution was sounded by a few subjects who fear that attempts to restructure aspects of Soviet society could have a destabilizing effect, especially if Western nations do not match the concessions the Soviets appear to

making.) Antinuclear subjects support greater contact between people at all levels of both societies and emphasized the value of "citizen exchanges." In addition, many proposed institutional collaboration through joint projects (e.g., space exploration), research, and cooperative efforts to resolve mutual problems (e.g., environmental degradation and dwindling resources).

Deep reservations about the character and objectives of the S.U. were voiced by virtually every member of the prodefense groups and only five reported any degree of optimism about either recent peace talks or changes within Soviet society. The prevailing view among both Active and Nonactive prodefense advocates is that the S.U. is untrustworthy (many asserted that the S.U. has never abided by any treaty) and committed to overthrowing Western society. A majority believes that the S.U. would prefer to achieve their expansionist goals through subversion rather than militarily, but a substantial minority believes that the S.U. is militarily superior to the U.S. and won't hesitate to use force if it sees the opportunity. These subjects fear that the S.U. is prepared to capitalize on any U.S. weakness and that a strong military posture is essential for security. (However, as noted earlier, an all-out nuclear war is regarded as extremely unlikely.)

Because of their misgivings about the S.U., prodefense advocates are divided on the the wisdom of military negotiations. In fact, about half in each group would

prefer that the U.S. had little or no official relationship with the Soviets. This faction views the S.U. as an illegitimate government, evil, and an intractable enemy of the U.S. Several likened the S.U. to Nazi Germany and recalled Chamberlain's futile efforts to negotiate peace with Hitler in 1938. Others see evidence of duplicity in the Soviet Union's opposition to SDI. The assertion that the S.U. has an SDI program of its own and will eventually use it to launch an attack against the West was made by several subjects. In short, this faction believes that any political or military negotiations with the S.U. are naive and destined to be betrayed.

The other half of Prodefense subjects are no less suspicious, but they believe the U.S. has little choice but to continue to deal with the Soviets. As noted previously, a few individuals in this group expressed a measure of optimism that changes within the structure of Soviet society might eventually lead to a relationship similar to that which the U.S. enjoys with China. They want to proceed slowly and cautiously with any accords and "verify everything."

Many subjects in each group used this question to raise other issues that bear on the nature and direction of Soviet-American relations. Along with hope that the two nations will eventually end their longstanding enmity, many antinuclear subjects were critical of U.S. leadership. They believe the U.S. has been overly cautious and worry

that peace opportunities will be lost unless the U.S. takes greater initiative. Many fear that Mr. Gorbachev's peace overtures will be withdrawn and that more militant elements within the Politburo will seize control if substantial progress is not made soon in improving East-West relations.

Aspects of American society were also criticized by the prodefense side. At some point in the interviews nearly half of all prodefense respondents stated that the U.S. has either wittingly or unwittingly materially strengthened the S.U. through technology transfer, financial assistance, and nonmilitary trade. Congress was criticized by several for failing to adequately support the military or for being too lenient with Soviet aggression. Finally, the antinuclear movement was singled out for particular criticism by a number of prodefense subjects. Antinuclear activists are regarded by many as naive at best and subversive at worst. Antinuclear organizations are viewed as misguided and were characterized as "useful dupes," "unilateral disarmers," and "world government advocates." (Several even asserted that antinuclear groups are financed and directed, at least in part, by the S.U.).

10. What do you consider to be the primary threat to the security of the U.S. at the present time?

In response to this question, interviewees in each group identified a number of issues that were felt to pose a substantial threat to the U.S. In each group a majority



pointed to internal rather than external security threats. Among prodefense groups, some form of moral decline was cited most frequently. Those that were mentioned more than once include drug abuse, AIDS, abortion, greed, divorce, and welfare. A few pointed to institutions such as Congress, television programming, and public schools that were felt to promote moral degeneration. Only three subjects (two in the Prodefense Nonactive group) cited nuclear war as the primary threat. The S.U. or communist subversion was mentioned by four members of the Prodefense Active group and by three Prodefense Nonactivists. In addition, three subjects in the Activist group regard internal subversion ("unilateral disarmers" or "world government advocates") as the greatest danger to U.S. security.

Economic and social problems were cited most frequently by a majority of antinuclear subjects. Some form of economic difficulty (e.g., high debt, deficit spending, trade deficit, poverty, unemployment, etc.) was nominated by almost half the Antinuclear Active group and by three people in the Nonactive group. Problems that were mentioned by more than one subject in the Activist group included environmental problems, overpopulation, resource limitations, drugs, education, and nationalism. Threats identified by more than one Nonactivist were education, decline in family stability, apathy, and an alienated citizenry. Only one person in the Nonactive group and no

one in the Active group regarded nuclear war as the primary threat facing the nation at the present time.

Considering the placement of this question near the end of a lengthy discussion about nuclear war it is perhaps surprising that more people (especially activists) did not cite nuclear war as a significant threat. This can only reinforce the conclusion that, for a majority of Americans, including nuclear activists, nuclear war is no longer perceived as threatening as it once was.

11. Do other members of your family share your interest and concerns about these issues?

Virtually every person that was interviewed reported at least occasional discussions about nuclear and defense issues with other family members, but only the Antinuclear Activists reported frequent family discussions. Antinuclear Activists also unanimously reported that their efforts were supported and encouraged by at least one close relative. In addition, half the members of this group stated that their spouse or companion was similarly active in antinuclear efforts. Interestingly, no subject in any other group reported organizational involvement by a spouse or other close relative.

Slightly more than half the Prodefense Activists (n = 8) stated that their efforts were encouraged by some family member. The rest characterized their closest relatives as largely unconcerned or uninformed. Fewer than

half in the Prodefense Nonactive group said they were supported by family members and many reported that their closest relatives were uninformed, apathetic, or skeptical of their beliefs in this area. Finally, most Antinuclear Nonactivists (n = 10) reported that their families were interested, informed, and held generally antinuclear sentiments, but were not involved personally with antinuclear organizations.

### Summary

Qualitative analysis of the interview data indicates that, as in the case of the questionnaire results, Position (Prodefense or Antinuclear) accounted for greater variance between groups than Activity (Active or Nonactive). In most cases, Prodefense groups differed substantially from Antinuclear groups in their appraisals of the most likely causes and probable consequences of nuclear war, the efficacy of protective and preventive strategies, attitudes toward the S.U., and the most important challenges facing the U.S. today. In a few cases, the Active and Nonactive groups within each position also demonstrated notable differences.

Subjects in the Antinuclear groups were divided on the likelihood of nuclear war, but tended to be more pessimistic than those in the Prodefense groups. For the most part, Antinuclear subjects expressed enthusiasm for recent U.S.-Soviet peace talks and many said they were more

optimistic than at any time in recent years. Of concern to these groups are the large numbers of nuclear weapons worldwide, the potential for accidents, and the threat that regional conflict poses to superpower rapprochement. If nuclear war does occur, the most probable causes are anticipated to be some type of technical malfunction (probably complicated by human error) or regional conflict. Those who hold antinuclear attitudes fear that once nuclear weapons are used in a superpower conflict, war will quickly escalate with catastrophic, global effects. These people believe that nuclear war and nuclear technology imperils human civilization and they ridicule survival planning of any kind.

Aside from their behavioral commitment to the antinuclear cause, Activists and Nonactivists demonstrate a number of other differences as well. First, many Activists indicated that concern about nuclear war was the primary reason they became involved in antinuclear efforts. Second, while those in both Antinuclear groups affirm the belief that individuals can make a contribution to lessening the likelihood of nuclear war, Activists offered much more specific suggestions including the benefits of organizational affiliation. Third, although they favor many of the same military and defense proposals (decreased military spending, arms reduction treaties, etc.) the Activists typically offered more detailed suggestions and provided more elaborate explanations for the programs they

support. Nonactive subjects seemed to be much more impatient with the pace of arms reductions and more than two-thirds advocated some type of unilateral reductions. Finally, Activists reported greater family support and fully half said their spouse or companion was equally involved in the antinuclear movement.

By a large majority, Prodefense subjects believe nuclear war is very unlikely, at least in the near future. Unlike those in the Antinuclear groups, these subjects are not reassured by arms negotiation treaties between the superpowers. Indeed, they are far more concerned about the Soviet Union than about nuclear war and half in each Prodefense group oppose any military negotiations with the Soviets. Perhaps the most common theme in the interviews with Prodefense subjects was suspicion and hostility toward the S.U. and virtually every individual expressed deep misgivings about some aspect of Soviet society or leadership.

Even though they do not believe nuclear war is likely, when asked to identify a most probable cause Prodefense supporters point to the danger of Soviet aggression. Most expect the Soviets to behave rationally, however, and a commitment to military preparedness is seen as an historically proven deterrent to Soviet adventurism. Therefore, they support a strong military and criticize agencies or institutions (e.g., Congress, Democrats, liberals, antinuclear groups, the U.N., etc.) which they

feel do not share a similar commitment.

Like their Active and Nonactive counterparts in the Antinuclear camp, Prodefense groups also differ in a number of ways. Neither group accepts the idea of a global nuclear war with billions of human casualties, nor do they believe that personal survival planning is warranted. However, should a nuclear war occur, those in the Prodefense Nonactive group are much less confident of survival. When questioned about the efficacy of individual action to either prepare for or prevent nuclear war, those in the Active group provided much more thoughtful and numerous suggestions, including advocacy of political action; Nonactivists generally felt that most individuals can do very little in either case. Another difference between Active and Nonactive groups was that the latter almost unanimously favored moral problems as the greatest threat to the U.S. while the former were evenly split between political subversion (either internal or external) and moral decline. Finally, many more Activists reported that their families were supportive and agreeable to their political views.

## CHAPTER V

### DISCUSSION

The purpose of the present study was to provide a more complete understanding of the motivational characteristics of nuclear activism. Despite the relatively large number of psychologically-oriented studies addressing the nuclear threat, only four have investigated the conditions that promote antinuclear activism and none before this one examined prodefense activism. Thus, the intent of this study was to add to the sparse data about those who have made an active behavioral commitment to the development of nuclear weapons policies and to examine the ways in which antinuclear and prodefense activists are similar or different.

Superficially, it would seem that people in the opposing prodefense and antinuclear camps would differ in most respects, and in terms of the policies they support, they do. However, because they have distinguished themselves through active participation in organizations dedicated to political and educational advocacy, they might be expected to differ from the general population in similar ways. For example, active affiliation in their respective organizations suggests that nuclear and defense

policies are much more salient for these individuals than for the public at large.

Political activism can be viewed as a continuum of participation. At one extreme a relatively small number of people are very active in furthering the policies they favor, often through some type of organizational involvement. Next, perhaps a larger number maintain group membership, but are not so committed and do little more than provide financial support. Below this is an even larger number of people who may hold informed opinions, but who have not taken the step to join or support organizations that lobby for the programs with which they sympathize. Finally, there are those (perhaps the majority in the U.S.) who, for whatever reasons, are disinclined to pursue organizational affiliation.

In this conceptualization, political activism of any type is assumed to depend on at least two separate factors. First, an individual must hold relatively strong opinions. Second, activists believe they can make a contribution to furthering their beliefs in the public arena. Nuclear activists, therefore, are expected to be strongly committed to certain policies and to believe that through their own efforts, either individually or in concert with others, they can influence the formation of public policy. Previous research with antinuclear activists supports this general conceptualization. Compared to the general public, antinuclear activists feel more threatened by nuclear war



(Locatelli & Holt, 1986; Tyler & McGraw, 1983; Wolf, et al., 1986), have more concrete images of nuclear war (Fiske, et al., 1983), are more politically active in general (Fiske, et al., 1983), and feel more efficacious about preventing nuclear war (Tyler & McGraw, 1983; Wolf, et al., 1986).

In order to extend the prior research and gain a more accurate description of nuclear activism (both prodefense and antinuclear), the present study compared people who have made a very strong commitment to their respective positions with people who are only nominally involved with either prodefense or antinuclear groups. To be sure, nominal affiliation entails a relatively high level of participation and it is assumed that, compared to the general population, those who are only nominally involved in nuclear activist groups are still a long way down the continuum of activism in terms of the opinions they hold and the degree to which they believe individuals can affect public policy.

While comparisons between organizational members and the general public have illuminated broad differences, comparing the most active and least active (referred to here as Nonactivists) group members allows for a more detailed characterization of those who hold leadership positions within these organizations and who best exemplify nuclear activism. For example, a major aim of this study was to clarify whether Active and Nonactive individuals

differ primarily in quantitative or qualitative ways. That is, do Activists possess wholly different attitudes and beliefs or do they simply hold them with greater conviction? Another possibility is that additional, previously unidentified factors motivate those who are most active on behalf of their viewpoints.

Based on previous research, several hypotheses were formulated about activists with respect to their attitudes about nuclear war and the extent to which individual citizens can influence nuclear and defense policies. Activists were predicted to make higher estimates of the probability of nuclear war, to perceive greater public concern about the nuclear threat, and to score higher on three measures of efficacy (General Political Efficacy, Response Efficacy, and Personal Resources) compared to those in the Nonactive groups. Other hypotheses were that Antinuclear groups would exceed Prodefense groups in their predictions of the the severity of nuclear war and that Prodefense Activists would score higher on Response Efficacy than Antinuclear Activists.

With regard to probability estimates of nuclear war, there was a trend toward significance for Antinuclear subjects to estimate a higher likelihood for nuclear war and an item analysis revealed that on two items, Antinuclear groups made significantly higher estimates. This contradicts the prediction that Activists would provide higher probability ratings. That those in the

Activists groups did not exceed Nonactive subjects was due, in part, to the fact that Prodefense Activists made relatively low probability estimates overall.

Since Prodefense advocates have not been studied before, their views regarding the probability of nuclear war were unknown. For purposes of hypothesis-testing it was assumed that they would hold similar views to those of the survivalists investigated by Tyler and McGraw (1983). Survivalists, it will be recalled, made high probability judgements and low severity judgements. Prodefense proponents, it seems, view nuclear war as relatively improbable and less severe than Antinuclear proponents. (It will be recalled that 20% in each Prodefense group rated nuclear war as very likely or almost certain and five of these six individuals were preparing fallout shelters. None of these subjects, however, regard themselves as survivalists, and four were strongly committed to political activism, something survivalists are disinclined to do.)

Because the present study did not sample the general public it cannot be said that Antinuclear Activists view nuclear war as more probable than most Americans. This study did find, however, that those most actively involved in antinuclear organizations do not view nuclear war as more probable than nominal members. One factor that moderated the pessimism of most Antinuclear subjects was their enthusiasm for recent arms negotiation talks. Almost everyone in the two Antinuclear groups reported that they

were very encouraged by these negotiations and by the INF treaty and many subjects stated they were much less anxious about nuclear war since arms negotiations had resumed. Thus, it seems very likely that the large majority of Antinuclear subjects view nuclear war as less probable now than they might have a few months or a year before.

When subjects described the most probable scenarios for nuclear war, responses again fell along Prodefense and Antinuclear lines. Prodefense subjects are most concerned about Soviet aggression and believe that if it occurs nuclear war will be largely limited to military targets. Those in the Antinuclear groups are most fearful about some type of systems malfunction or of a regional war leading to superpower confrontation. Almost unanimously Antinuclear respondents expect that nuclear war would be catastrophic and they do not expect or want to be among the survivors.

This points to one of the most fundamental differences between the Antinuclear and Prodefense positions. Characteristically, Antinuclear proponents are very concerned about the nuclear weapons systems themselves and are relatively free of hostility toward the S.U. In contrast, Prodefense subjects minimize the potential for technological or systems failures and express deep suspicion, even hostility, toward the S.U. During the interviews Antinuclear subjects frequently recalled examples of disasters or near-disasters involving miscommunication or technical malfunctions. Many cited the

civilian airliners that were destroyed by the U.S. and Soviet military, the Challenger accident, Chernobyl, and reports of mishaps involving nuclear weapons. Others expressed concern about the potential for critical computer malfunctions and the very short response time in which errors can be detected before aircraft are scrambled and missiles are launched. Thus, for Antinuclear subjects, the complexity of nuclear weapons systems, the large numbers of these weapons, and the number of nations possessing and striving to possess nuclear weapons makes some type of major mishap seem likely.

When asked to comment about the potential for some type of accident to cause nuclear war, very few Prodefense subjects expressed concern. Most pointed with reassurance to the fact that in more than 40 years of living with nuclear weapons no major accident has occurred. Instead of fearing nuclear technology, Prodefense subjects believe nuclear weapons are essential to deterring Soviet aggression. A major theme repeated by virtually every Prodefense subject in both groups was that the S.U. is an imperialistic nation bent on undermining the West. A majority of these subjects stated that the S.U. cannot be trusted and more than half opposed any type of military negotiation between the superpowers.

Given these two very different worldviews the policy preferences of each side are relatively easy to predict. In general, Antinuclear advocates favor anything that will

reduce the number of nuclear weapons as well as tensions between East and West. They support arms treaties and greater cooperation and understanding between the superpowers. Those who hold Prodefense views oppose arms treaties and believe that maintaining a strong military deterrence is the best way to avoid nuclear war. They do not trust Soviet intentions and oppose the kinds of cooperative arrangements advocated by Antinuclear groups.

Estimating the likelihood of surviving nuclear war depends on the kind of scenario one envisions and, as hypothesized, estimates fell along Antinuclear and Prodefense lines. Several items in both the questionnaire and the interview addressed the issue of surviving nuclear war and of making preparations for survival. In every case, Antinuclear subjects rejected survival planning whether by individuals or through some type of national civil defense program. On the other side, those in the Prodefense groups were more confident about their own personal survival. In the first place, Prodefense subjects are less concerned about the possibility of nuclear war and they envision less disastrous consequences should it occur. At least half in each of these groups has given some consideration to what they would do if nuclear war seemed imminent, and a few, including four Activists, has actually built shelters.

One seeming contradiction emerged between the responses Prodefense subjects provided in the interviews

and on the questionnaire with respect to surviving nuclear war. On the questionnaire, Active and Nonactive groups recorded similar optimism about survival (fairly likely). Interview responses, however, suggest that Activists are more confident about survival than Nonactivists. For example, while two-thirds of Activists expressed confidence that they would personally survive nuclear war, only one-third of the Nonactivists did so. The explanation for this difference may lie in the way in which the questions were asked. On the questionnaire, subjects were forced to choose between several estimates of likelihood and an equivocal option was not provided. These constraints were not present in the interview, though, and a majority of the Prodefense Nonactive group said they didn't know whether they would survive or not.

The second set of variables that have been associated with nuclear activism relate to efficacy. Studies with antinuclear activists have reported mixed results depending on how efficacy was measured and what groups were being studied. Tyler and McGraw (1983) found that activists have greater faith in the ability of citizens to reduce the likelihood of nuclear war. Locatelli and Holt (1986) examined beliefs about influencing the political process and found no differences between active and nonactive antinuclear advocates. Finally, Wolf and her colleagues (1986) reported that people who hold antinuclear views are more likely to endorse the kinds of strategies used by

political advocacy organizations (response efficacy) and to believe they possess the personal resources (time and money) necessary to support their positions in the political arena.

The present study investigated each of these constructs either in the questionnaire, during interviews, or both. In the cases of General Political Efficacy, Response Efficacy and Personal Resources it was predicted that those in the Active groups would report greater efficacy than those in the Nonactive groups. Only in the case of Personal Resources was the hypothesis supported, however. Both Prodefense and Antinuclear Activists affirmed the belief that they could dedicate more time and financial resources to their respective causes than their Nonactive counterparts.

Considering that a fairly narrow range along the activism continuum was sampled, it is not too surprising, perhaps, that the predicted differences were not found between Active and Nonactive subjects. Locatelli and Holt also reported no difference on measures of political efficacy in their comparison of active and nonactive subjects. Once again, however, the interview results do not entirely support the questionnaire data. The questionnaire items that composed the General Political Efficacy (GPE) scale asked about the responsiveness of the government to the concerns and influence of ordinary citizens while the Response Efficacy (RE) scale had



subjects rate the potential efficacy of a number of different strategies commonly used by grassroots political groups. In neither case did Activists demonstrate a greater sense of efficacy.

In contrast to the questionnaire, two interview questions examined protection and prevention of nuclear war, areas that also relate to perceptions of efficacy. Subjects were asked to what extent the average person could either decrease the likelihood of nuclear war or protect themselves from its effects. On both items the responses of Prodefense Activists greatly exceeded those of Nonactive subjects in terms of the number and specificity of their suggestions. Moreover, very few Nonactive subjects cited organizational involvement as a way of furthering their political views. In the case of Antinuclear groups, the results were similar. These subjects rejected self-protective strategies, but with regard to preventive efforts Antinuclear Activists gave a greater number and variety of quite specific suggestions, whereas Nonactivists tended to give general answers. And, as with Prodefense Activists, Antinuclear Activists appeared to value collective organizational efforts more highly than those in the Nonactive group.

Without the interview data it would appear that the most actively involved subjects have no greater sense of efficacy than those who are only nominally involved. Responses to interview queries, however, indicates

otherwise. The simplest explanation for this apparent inconsistency is that different kinds of efficacy were measured in the questionnaire and interview. It may well be that Active and Nonactive nuclear advocates do not differ when it comes to the efficacy of general political involvement and grassroots political activities, but do when it comes to thinking about specific protective and preventive strategies.

This explanation is not really satisfying, though, when one seeks to explain the failure of most Nonactive subjects to even mention the most basic kinds of political and educational activities during the interviews. As noted previously, this was much more pronounced for Nonactive subjects in the Prodefense camp (many of whom said they didn't know any way in which people could contribute to lessening the likelihood of nuclear war), but Antinuclear Nonactivists also were markedly less likely to endorse a range of activities commonly engaged in by antinuclear organizations. A better explanation for the discrepancy between efficacy measurements is that the free response format of the interview provided a truer measure of subjects' perceptions and that real differences do exist between Active and Nonactive subjects.

It can be argued that simply asking people what they believe about something will result in a more complete answer than asking them to rate the value of items presented in a menu. Menu ratings do have certain research

virtues, but they may also promote a response set that does not accurately reflect the subjects' views. That is, subjects may endorse views when presented with a forced choice selection that they would not offer spontaneously to an open-ended inquiry. Because the interviews were conducted after the questionnaires had been completed, whatever response bias existed should have been demonstrated equally by all groups. This clearly was not the case. With respect to the efficacy judgements investigated in the interview, Activists were much more articulate in their statements about the ways in which individuals can cope with nuclear and security threats and were much more likely to endorse a variety of political, educational, personal, and organizational behavior. The conclusion, then, is that while the questionnaire did not reveal differences in efficacy between Active and Nonactive groups, differences do exist nevertheless. It is hoped that future research will investigate this area further, either through additional interviews or with more extensive questionnaires.

The final research hypotheses predicted that Activists would admit greater concern and thought about nuclear war and would perceive greater concern among the general public. Analysis of responses found that Antinuclear subjects experience greater personal anxiety about nuclear war while Activists think more about it than Nonactivists. The relatively low level of personal concern among all

subjects is consistent with their evaluations of the primary threats facing the U.S. today. Despite the fact that all the subjects were affiliated actively or nominally with antinuclear and prodefense organizations, very few regard nuclear war or security related issues to be of greatest danger. The large majority of all subjects identified various economic, moral or social problems as most threatening. Only in the Prodefense Active group did a substantial minority point to the danger of political instability (either through internal subversion or external aggression) as the greatest threat to the security of the nation. It is interesting, but not unexpected given their worldview, that so many Prodefense Activists singled out antinuclear organizations for special criticism. To those in the Prodefense camp, the antinuclear movement represents a security threat, both because of the views they espouse and because they have been relatively successful in gaining media attention for their position.

A final distinction between Active and Nonactive subjects might bear on the willingness people have to commit themselves to an activist posture. When subjects were asked how much they discuss these issues with other family members those in the Active groups reported somewhat more family support for their work. This was especially true for Antinuclear Activists half of whom reported that their spouse or companion was equally involved. Overall, Antinuclear subjects and Prodefense Activists stated that

their closest family members were generally supportive of their political views, but those in the two Active groups reported more frequent family discussion. Many in the Prodefense Nonactive group said that they rarely discuss these issues with others or that family members do not support their opinions. The present research did not investigate this area in detail, but it may well be that the support or involvement of other family members is an important determinant in the commitment to activism.

### Summary

In conclusion, differences were observed between Antinuclear and Prodefense advocates on a number of variables and between Activists and Nonactivists on others. Antinuclear proponents tended to regard nuclear war as more likely and more severe than Prodefense advocates. A central finding of this study is that attitudes toward the Soviet Union and nuclear technology are of fundamental importance in predicting a person's stance with regard to most nuclear weapons and defense policies. Those in the Prodefense groups are most concerned about Soviet aggression and view nuclear weapons as necessary to defend the security of the U.S. These groups also favor defensive programs such as SDI and civil defense planning because of their perceived importance for deterring aggression. Antinuclear subjects, in contrast, hold generally benign views toward the S.U., but are very uncomfortable with the

technology and control of nuclear weapons systems.

Efficacy measures showed somewhat equivocal results between Activists and Nonactivists. Questionnaire data found no differences on measures of General Political and Response Efficacy, but interview responses to questions about the efficacy of self-protective and preventive activities indicated that Activists on the Prodefense side felt more efficacious about both prevention and protection than Prodefense Nonactivists while Antinuclear Activists reported a stronger sense of efficacy for preventing nuclear war than Antinuclear Nonactivists.

The results of this research suggest a number of areas for future investigation. It is still not clear what distinguishes those who make a strong behavioral commitment to nuclear and defense activism from those who are only nominally affiliated with these groups. Perceptions of efficacy may be one way in which people do differ in this regard and it would be useful to examine this area further. Another possible factor raised during interviews concerns the importance of family and peer support. It seems to be the case, at least for antinuclear supporters, that the primary involvement of a spouse or other close relative is associated, if not instrumental, in the commitment of one's personal resources to organizational activism. Finally, nationalistic sentiments and attitudes toward the Soviet Union appear basic to the positions people hold regarding overall security policies. Further examination of these

influences may yield additional understanding about secondary attitudes and behavior.

## REFERENCES

- Adams, J. F. (1963). Adolescent opinion on national problems. Personnel and Guidance Journal, 42, 397-400.
- Allerhand, M. E. (1965). Children's reactions to societal crises: Cold war crisis. American Journal of Orthopsychiatry, 35, 124-130.
- Allport, G. W. (1945). Human nature and the peace. Psychological Bulletin, 42, 376-378.
- Anderson, J. R. (1980). Cognitive psychology and its implications. San Francisco: W. H. Freeman.
- Ardila, R. (1986). The psychological impact of the nuclear threat on the Third World: The case of Columbia. International Journal of Mental Health, 15, 162-171.
- Bachman, J.G. (1983). American high school seniors view the military: 1976-1982. Armed Forces and Society, 10, 86-104.
- Beardslee, W. R., & Mack, J. E. (1983). Adolescents and the threat of nuclear war: The evolution of a perspective. Yale Journal of Biology and Medicine, 56, 79-91.
- Beyond War. (1985). Selected Resources. Palo Alto, CA: Beyond War.
- Carey, M. J. (1982, January). Psychological fallout. Bulletin of the Atomic Scientists, 38, 20-24.



- Chivian, E., Mack, J. E., Waletzky, J. P., Lazaroff, C., Doctor, R., & Goldenring, J. M. (1985). Soviet children and the threat of nuclear war: A preliminary study. American Journal of Orthopsychiatry, 55, 484-502.
- Cooper, D. (1979). When students tried to think about the nuclear arms race. The Center Magazine, 15(4), 2-5.
- Depression. (1987, May 4). Newsweek, pp. 48-52, 54-57.
- Deutsch, M. (1961). Some considerations relevant to national policy. Journal of Social Issues, 17(3), 57-68.
- Deutsch, M. (1962). Psychological alternatives to war. Journal of Social Issues, 18(2), 97-119.
- Deutsch, M. (1983). The prevention of world war III: A psychological perspective. Political Psychology, 4, 3-31.
- Erikson, E. H. (1963). Childhood and society (2nd ed.). New York: W. H. Norton.
- Erikson, E. H. (1985). Pseudospeciation in the nuclear age. Political Psychology, 6, 213-218.
- Escalona, S. (1965). Children and the threat of nuclear war. In M. Schwebel (Ed.), Behavioral science and human survival (pp. 201-209). Palo Alto, CA: Science and Behavioral Books.
- Escalona, S. (1982). Growing up with the threat of nuclear war: Some indirect effects on personality development. American Journal of Orthopsychiatry, 52, 600-607.
- Fiske, S. T. (1987). People's reactions to nuclear war. American Psychologist, 42, 207-217.

- Fiske, S. T., Pratto, F., & Pavelchak, M. A. (1983).  
Citizen's images of nuclear war: Content and  
consequences. Journal of Social Issues, 39(1), 41-65.
- Frank, J. D. (1961). Emotional and motivational aspects  
of the disarmament problem. Journal of Social Issues,  
17(3), 20-27.
- Frank, J. D. (1980). The nuclear arms race:  
Sociopsychological aspects. American Journal of Public  
Health, 70, 950-952.
- Frank, J. D. (1982). Prenuclear-age leaders and the  
nuclear arms race. American Journal of Orthopsychiatry,  
52, 630-637.
- Frank, J. D. (1983). Nuclear arms and prenuclear leaders:  
Sociopsychological aspects of the nuclear arms race.  
Political Psychology, 4, 393-408.
- Frank, J. D. (1984). Nuclear death: An unprecedented  
challenge to psychiatry and religion. American Journal  
of Psychiatry, 141, 1343-1348.
- Glad, B. (1983). Black-and-white thinking: Ronald Reagan's  
approach to foreign policy. Political Psychology, 4,  
33-76.
- Goldberg, S., LaCombe, S., Levinson, D., Parker, K. R.,  
Ross, C., & Sommers, F. (1985). Thinking about the  
threat of nuclear war: Revelance to mental health.  
American Journal of Orthopsychiatry, 55, 503- 512.
- Goldenring, J. M., & Doctor, R. M. (1984, May 5).  
Adolescent fears of war. Letter to the editor. Lancet,

- 8384, pp. 1022-1023.
- Goldenring, J.M., & Doctor, R. (1986). Teen-age worry about nuclear war: North American and European questionnaire studies. International Journal of Mental Health, 15, 72-92.
- Goldman, D. S. & Greenberg, W. M. (1982). Preparing for nuclear war: The psychological effects. American Journal of Orthopsychiatry, 52, 580-581.
- Goodman, L. A., Mack, J. E., Beardslee, W. R., & Snow, R. M. (1983). The threat of nuclear war and the nuclear arms race: Adolescent experience and perceptions. Political Psychology, 4, 501-530.
- Greenwald, D.S., & Zeitlin, S.J. (1987). No reason to talk about it: Families confront the nuclear taboo. New York: W. W. Norton.
- Holt, R. R. (1984). Can psychology meet Einstein's challenge? Political Psychology, 5, 199-225.
- Kahn, H. (1984). Thinking about the unthinkable in the 1980's. New York: Simon and Schuster.
- Kahneman, D., Slovic, P., & Tversky, A. (Eds.) (1982). Judgement under uncertainty: Heuristics and biases. New York: Cambridge University Press.
- Kahneman, D. & Tversky, A. (1982). Variants of uncertainty. Cognition, 11, 143-157.
- Katz, D. (1961). Current and needed psychological research in international relations. Journal of Social Issues, 17(3), 69-78.

- Kramer, B. M., Kalick, S. M., & Milburn, M. A. (1983). Attitudes toward nuclear weapons and nuclear war: 1945-1982. Journal of Social Issues, 39(1), 7-24.
- Krauthammer, C. (1988, December 19). Beyond the cold war. The New Republic, pp. 14-15, 18-19.
- Kull, S. (1984). War as a species disorder. Journal of Humanistic Psychology, 24(3), 55-64.
- Lazarus, R. S. & Launier, R. (1978). Stress-related transactions between person and environment. In Pervin, L. A. & Lewis, M. (Eds.), Perspectives in interactional psychology. New York: Plenum.
- Lifton, R. J. (1980). Nuclearism. Journal of Clinical Child Psychology, 9, 119-124.
- Lifton, R. J. (1982). Beyond psychic numbing: A call to awareness. American Journal of Orthopsychiatry, 52, 619-629.
- Locatelli, M.G. & Holt, R.R. (1986). Antinuclear activism, psychic numbing, and mental health. International Journal of Mental Health, 15, 143-161.
- Mack, J. E. (1981, April). Psychosocial effects of the nuclear arms race. Bulletin of the Atomic Scientists, 37, 18-23.
- Mack, J. E. (1982). The perception of U.S.-Soviet intentions and other psychological dimensions of the nuclear arms race. American Journal of Orthopsychiatry, 52, 590-599.
- Mack, J. E. (1984). Resistances to knowing in the nuclear

- age. Harvard Educational Review, 54, 260-270.
- Mack, J. E. (1985). Toward a collective psychopathology of the nuclear arms competition. Political Psychology, 6, 291-321.
- Menninger, K. (1983). The suicidal intention of nuclear armament. Bulletin of the Menninger Clinic, 47, 325-353.
- Milbrath, L. W. & Goel, M. L. (1977). Political participation (2nd ed.). Lanham, MD.: University Press of America.
- Milburn, T. W. (1961). The concept of deterrence: Some logical and psychological considerations. Journal of Social Issues, 17(3), 3-11.
- Morawski, J. G., & Goldstein, S. E. (1985). Psychology and nuclear war: A chapter in our legacy of social responsibility. American Psychologist, 40, 276-284.
- Moyer, R. S. (1985, January). The enemy within. Psychology Today, 19, pp. 30-37.
- Myers-Walls, J. A., & Fry-Miller, K. M. (1984, May). Nuclear war: Helping children overcome fears. Young Children, 39, pp. 27-32.
- Nelson, A. (1985). Psychological equivalence: Awareness and response-ability in our nuclear age. American Psychologist, 40, 549-556.
- Newcomb, M. D. (1986). Nuclear attitudes and reactions: Associations with depression, drug use, and quality of life. Journal of Personality and Social Psychology, 50, 906-920.

- Osgood, C. E. (1961). An analysis of the cold war mentality. Journal of Social Issues, 17(3), 12-19.
- Osgood, C. E. (1962). An alternative to war or surrender. Urbana, IL: University of Illinois.
- Pinderhughes, C. A. (1979). Differential bonding: Toward a psychophysiological theory of stereotyping. American Journal of Psychiatry, 136, 33-37.
- Rogers, C. (1982). A psychologist looks at nuclear war: Its threat, its possible prevention. Journal of Humanistic Psychology, 22, 9-20.
- Rudmin, F. (1986). History of peace psychology: Comment on Morawski and Goldstein [Letter to the editor]. American Psychologist, 41, 586-588.
- Russell, R. W. (1961). Roles for psychologists in the formulation and evaluation of policy. Journal of Social Issues, 17(3), 79-84.
- Sagan, C. (1986). Nuclear winter. In D. U. Gregory (Ed.), The nuclear predicament: A sourcebook (pp. 13-18). New York: St. Martin's.
- Salguero, C. (1983). Children and the nuclear threat: A child psychiatrist's personal reflections. Yale Journal of Biology and Medicine, 56, 93-96.
- Schwebel, M. (1965). Nuclear cold war: Student opinion and professional responsibility. In M. Schwebel (Ed.), Behavioral science and human survival (pp. 210-234), Palo Alto, CA: Science and Behavioral Books.
- Schwebel, M. (1982). Effects of the nuclear war threat on

- children and teenagers: Implications for professionals. American Journal of Orthopsychiatry, 52, 608-618.
- Simon, R. (1984). Living within the nuclear shadow. Alberta Psychology, 13(5,6), 6-7.
- Snow, R., & Goodman, L. (1984). Decision making in a nuclear age. Journal of Education, 166, 103-107.
- Solantaus, T., Rimpela, M., & Taipale, V. (1984, April 7). The threat of war in the minds of 12-18 year-olds in Finland. Lancet, 8380, 784-785.
- Stagner, R. (1961). Personality dynamics and social conflict. Journal of Social Issues, 17(3), 28-44.
- Stein, H. F. (1985). Psychological complementarity in Soviet-American relations. Political Psychology, 6, 249-261.
- Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and non-avoidant coping strategies: A meta-analysis. Health Psychology, 4, 249-288.
- Tetlock, P. E. (1983). Policy-makers' images of international conflict. Journal of Social Issues, 39(1), 67-86.
- Thomas, L. (1980). Late night thoughts on listening to Mahler's ninth symphony. Toronto: Bantam.
- Thurlow, S. (1982). Nuclear war in human perspective: A survivor's report. American Journal of Orthopsychiatry, 5, 638-645.
- Turco, R. P., Toon, O. B., Ackerman, T. P., Pollack, J. B., & Sagan, C. (1983). Nuclear winter: Global consequences

- of multiple nuclear explosions. Science, 222, 1283-1292.
- Tyler, T. R., McGraw, K. M. (1983). The threat of nuclear war: Risk interpretation and behavioral response. Journal of Social Issues, 39(1), 25-40.
- Van Ornum, W., & Van Ornum, M. W. (1984). Talking to children about nuclear war. New York: Continuum.
- Volkan, V. D. (1985). The need to have enemies and allies: A developmental approach. Political Psychology, 6, 219-247.
- Walsh, R. (1984). Staying alive: The psychology of human survival. Boulder, CO: New Science Library.
- White, R. K. (1968). Nobody wanted war: Misperception in Viet Nam and other wars. Garden City, NY: Doubleday.
- White, R. K. (1984). Fearful warriors: A psychological profile of U.S.-Soviet relations. New York: Free Press.
- Winer, B. J. (1971). Statistical principles in experimental design (2nd ed.). New York: McGraw-Hill.
- Wolf, S., Gregory, W. L., & Stephan, W. G. (1986). Protection motivation theory: Prediction of intentions to engage in anti-nuclear war behaviors. Journal of Applied Social Psychology, 16, 310-321.
- Yankelovich, D. (1985, Winter). How the public learns the public's business. Kettering Review, (XX), pp. 8-18.
- Yankelovich, D., & Doble, J. (1984). The public mood: Nuclear weapons and the U.S.S.R. Foreign Affairs, 63, 33-46.
- Zeitlin, S. (1984). What do we tell mom and dad? Alberta



Psychology, 13(5,6), 26-27.

Zweigenhaft, R. L. (1985). Providing information and shaping attitudes about nuclear dangers: Implications for public education. Political Psychology, 6, 461-480.

APPENDIX A

SUBJECT INSTRUCTIONS

This is a survey about how people think and feel about important issues of national security. Your participation is entirely voluntary.

There are no correct or incorrect answers to these questions. All that matters is how you think and feel. Any answer is correct if it is right for you.

This research is being conducted according to the Ethical Guidelines established by the American Psychological Association. Your answers to these questions are completely private and confidential. Your name has not been recorded and will not be associated with your answers in any way. No one will know how you responded except the interviewer. For research purposes your answers will be grouped with others who have agreed to participate in order to learn more about how knowledgeable adults think about these issues.

If you are interested in the results of the study, I will be happy to provide you with a summary when all the data has been analyzed. It would be appreciated if you would not discuss the details of this research with anyone until the study has been completed. I will be happy to answer any questions you may have at the conclusion of the interview.

Thank you very much for your assistance in this project.

APPENDIX B

RESEARCH QUESTIONNAIRE

1. How probable is it that the United States will be involved in a nuclear war by the turn of the century?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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2. How probable is it that the United States will be involved in a nuclear war within your lifetime?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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3. If the United States and the Soviet Union confronted each other militarily in the near future, how likely is it that nuclear weapons would be used?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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4. How likely is it that nations other than the United States and the Soviet Union will use nuclear weapons in military combat within the next 10 years?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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5. If nations other than the United States and the Soviet Union used nuclear weapons in a regional conflict, how likely is it that the superpowers would be drawn into the conflict?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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6. How likely is it that some type of accident or technical malfunction could precipitate a nuclear war between the superpowers?

not possible	very unlikely	fairly unlikely	fairly likely	very likely	almost certain
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7. How likely would it be that you and your household would survive a nuclear war?

almost certain	very likely	fairly likely	fairly unlikely	very unlikely	not possible
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8. How likely is it that the United States as a nation would survive a nuclear war?

almost certain	very likely	fairly likely	fairly unlikely	very unlikely	not possible
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9. In general, how responsive do you believe the government is to the opinions of concerned and knowledgeable citizens?

very responsive	somewhat responsive	mostly unresponsive	very unresponsive
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10. How responsive do you believe the government is to citizens' opinions about nuclear policy issues?

very responsive	somewhat responsive	mostly unresponsive	very unresponsive
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11. In general, how much does the average person have to say about the way the country is run?

a great deal	quite a bit	a little	very little
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12. To what extent do you have the time to work on behalf of your beliefs about nuclear and defense issues?

great deal	moderate amount	small amount	very little	not at all
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13. To what extent do you have the financial resources to support your beliefs about defense and nuclear issues?

great deal	moderate amount	small amount	very little	not at all
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14. To what extent can the average person decrease the likelihood of nuclear war?

great deal	moderate amount	small amount	very little	not at all
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15. To what extent can the average person protect themselves from nuclear war?

great deal	moderate amount	small amount	very little	not at all
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16. Here is a list of things political activists sometimes do to further their viewpoints. How effective do you think these kinds of activities are?

Circle the number that corresponds to your answer:

extremely effective	moderately effective	not sure	moderately ineffective	extremely ineffective			
1	2	3	4	5			
signing petitions			1	2	3	4	5
writing to public officials			1	2	3	4	5
writing to newspapers			1	2	3	4	5
becoming more informed			1	2	3	4	5
expressing your opinions to others			1	2	3	4	5
joining a group and working with others who share your opinions			1	2	3	4	5
working in a political campaign			1	2	3	4	5
voting in elections			1	2	3	4	5
educating others			1	2	3	4	5
joining public demonstrations			1	2	3	4	5
civil disobedience			1	2	3	4	5

Below is a list of policies that have been proposed to lessen the danger of nuclear war. How much do you favor or oppose each of the following?

17. An anti-missile defense, such as SDI, to protect major population centers and military installations from enemy missiles

strongly favor	favor	uncertain	oppose	strongly oppose
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18. Mutual, verifiable freeze on testing, production, and deployment of nuclear weapons

strongly favor	favor	uncertain	oppose	strongly oppose
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19. Nuclear arms treaties with the Soviet Union

strongly favor	favor	uncertain	oppose	strongly oppose
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20. A program to relocate people in the event of an impending nuclear attack

strongly favor	favor	uncertain	oppose	strongly oppose
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21. Unilateral freeze (by the U.S.) on weapons testing

strongly favor	favor	uncertain	oppose	strongly oppose
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22. Unilateral reduction (by the U.S.) of nuclear arms

strongly favor	favor	uncertain	oppose	strongly oppose
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23. Building and stocking shelters to protect citizens from nuclear attack

strongly favor	favor	uncertain	oppose	strongly oppose
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24. A policy of strong nuclear deterrence

strongly favor	favor	uncertain	oppose	strongly oppose
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25. A policy of "No First Use" of nuclear weapons

strongly favor	favor	uncertain	oppose	strongly oppose
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26. Increased spending on nuclear weapons research

strongly favor	favor	uncertain	oppose	strongly oppose
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27. Increased funding for non-nuclear weapons

strongly favor	favor	uncertain	oppose	strongly oppose
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28. A ground based missile defense system to protect sensitive military installations

strongly favor	favor	uncertain	oppose	strongly oppose
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29. General reduction in military spending

strongly favor	favor	uncertain	oppose	strongly oppose
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30. Withdrawal of short-range U.S. and Soviet missiles from Europe

strongly favor	favor	uncertain	oppose	strongly oppose
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31. Stronger controls on the transfer of nuclear technology and materials to non-nuclear and Third World nations

strongly favor	favor	uncertain	oppose	strongly oppose
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32. Reduction by both the U.S. and U.S.S.R. of long-range strategic nuclear missiles

strongly favor	favor	uncertain	oppose	strongly oppose
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33. How concerned do you think most people are about the arms race and the possibility of nuclear war?

very concerned	quite concerned	a little concerned	not at all concerned	not sure
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34. How often do you think about the possibility and consequences of nuclear war?

never	seldom	sometimes	often	very often
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35. How worried or anxious are you about the possibility of nuclear war?

very worried	quite worried	a little worried	not at all worried
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APPENDIX C

INTERVIEW QUESTIONS

1. Why do you believe the likelihood of nuclear war is                      by the year 2000? What leads you to this conclusion?
2. If the U.S. became involved in a nuclear war, how do you imagine it might happen? What is the most likely scenario?
3. If the U.S. were involved in a nuclear war, what do you think the consequences would be for you and your family?
4. Have you ever considered the possibility of nuclear war when making decisions about the future such as where to live, etc.?
5. Have you given any thought or made any preparations for the safety of yourself and your family in the event of nuclear war? If so, what were they?
6. What, if anything, can the average person do to protect himself or herself from the effects of nuclear war?
7. What, if anything, can the average person do to help prevent a nuclear war from occurring?
8. In your own words, what kinds of nuclear and defense policies do you support and why?
9. What kind of relationship should the U.S. pursue with the Soviet Union?
10. What do you consider to be the primary threat to the security of the U.S. at the present time?
11. Do other members of your family share your interest and concern in these issues? Do you discuss these issues with other family members? Are there differences of opinion?

APPENDIX D

SAMPLE INTERVIEWS

## SAMPLE INTERVIEW: ANTINUCLEAR ACTIVIST

I: On this first question, you said that you think nuclear war is "fairly likely" by the turn of the century. What kinds of things lead you to this conclusion?

S: Mostly technical reasons. Basically, it has to do with computer viruses, the inability or lack of technical ability that the Russians have. I'm sure that if they blew a nuclear warhead up over Portland it would be quite effective, but take the shuttle, I mean, as good as we are, we make mistakes. We're not infallible and mistakes do happen. I don't war would be premeditated, it would be a mistake. It would be one of those catastrophes. The shuttle was overwhelming, and yet, we're supposed to be world class. Well, I'll tell you what, the Russians don't even have an economy to be world class and because of that, that's the likelihood. I think both countries understand the implications well enough.

I: Do you feel it's more likely that the S.U. will have some type of a technological failure?

S: No. I think it's on both sides. I think if we were going to have an odds-on bet, yeah, it would be the Russians, but it doesn't exclude us, just because of things like the shuttle. Engines falling off of jets. I mean, come on, we're still first-class in our technology and yet, accidents happen. Let's face it. Three Mile Island.

We're first-class. The best technology in the world, and we have an accident like that. It's not a malicious thing between the two countries.

I: Do you think that something like that could precipitate a war between the superpowers?

S: I don't know. I really don't know, but when you take into consideration that between the two countries there exceeds 60,000 warheads and in the world there's only about 2,500 cities, what's a worst case scenario? I mean even if they only let go 5% or 3% we're talking about a major situation! When you compare a megaton or a gigaton detonation with Mount St. Helens and the damage it did, and it wasn't radioactive. You take Chernobyl, we don't feel it or see it. Some say that the release from Chernobyl won't have any effect on our health over our lifetime, or maybe it will effect one person in 10 million, that's probably true. But the effect of that rise in radiation on microorganisms like viruses probably has quite an effect. And so then, you have a tremendous amount of new diseases which you didn't have before. The viruses can mutate very quickly in those kinds of scenarios, so people aren't necessarily immune to them. So, you have this whole other scenario other than the radiation or the fallout, even in a one missile for one missile scenario. You've increased the level of radiation minutely and it may not have a direct effect on you or me, but you have all of those things that,

in turn, will eventually have an effect on us.

I: I was just reading an article today on the long-term health hazards of Chernobyl and the study said there would be very little if any measurable effect beyond a few miles radius. There was no mention of possible environmental effects on microorganisms.

S: Uh-huh. Look around you. There are viruses everywhere. They are effected by ultraviolet rays and so on. They change all the time. We catch colds because they mutate so quickly.

I: So, the nuclear war scenario you've outlined may not be catastrophic, but it could effect us in subtle ways.

S: Yeah. Which in turn effects us economically. You have tens of millions of people being sick, ten times a year more than they were, there are implications on hospitals, implications on industry, all kinds of dislocations you just don't think about. There's a teacher at school that keeps saying, "God, it's too complicated man! I don't want to talk about it." That's the problem. The issues today aren't cut and dried anymore, they take a whole new way of thinking.

I: I've talked with a number of people recently who have built personal shelters or are planning personal shelters to protect themselves from nuclear war. What are your thoughts about that?

S: That doesn't do a whole lot of good. I really don't



think it does. Look at Hanford; they've polluted the water around there. How much canned water are you going to put in your shelter? It isn't a reality. We're too tied individually to the environment. The environment's too important. You can't live for 3 years on bottled water unless you have a source that's free from contamination. It wouldn't even take a nuclear war. A nuclear disaster of any kind would cause tremendous problems.

I: Do you think there're any precautions that people can take to protect themselves?

S: Other than moving to another hemisphere, I doubt it. I think the best precaution is to read, think, and respond politically.

I: You've anticipated my next question: What do you think the average person can do to lessen the likelihood of nuclear war?

S: Read, think, talk, and vote. That's it. We're only here having this interview because the Russians decided not to push the button today. Nor the Americans.

I: A number of questions had to do with particular policies. In your own words, what kind of nuclear and defense policies do you favor?

S: That's a good question. I think I would answer it in this way and that is to cut down our nuclear armaments to say 500 to 1000 warheads. I don't think we've ever had a nuclear defense and I think 500 to a 1000 would be a

defense. I think the best defense we could have would be to get rid of our offense. When you think about the number of warheads we have and the number of cities there are, it's not reasonable.

I: You said there were 2500 cities. Is that worldwide?

S: Yeah.

I: Of what size are these 2500 cities? Are they the largest 2500 cities?

S: Anything of any economic consequence. I did a slide one time to represent all of the economic targets in Russia and there were about 400 of them that were of any consequence whatsoever. And then you had all the warheads on our side divided up against the 400 targets and it makes no sense whatsoever. Just that experience to me was worth reading several books.

I: Uh-huh.

S: According to what I've read, the TNT equivalent of the average warhead that is pointed at Portland would completely fill a string of boxcars that would stretch from here to Medford. And there's supposed to be 7 of those warheads aimed at Portland. Now, they don't expect all of them to get through, but in the best case scenario with SDI, one will make it.

I: I'd like to hear more about your thoughts on SDI.

S: I think it's good research money spent in the wrong direction. I think we ought to be spending that kind of

money on research and development, no questions asked, but I wouldn't spend it on this system. When you take all the nuclear armaments that have been researched and produced since 1945 until today, you're talking about 10 trillion dollars. Well, what's 10 trillion bucks? You can buy everything in the U.S., every building, every pencil, every computer, every product, every service, everything for that \$10 trillion. Everything except the land. Let's say we took half of that money and had spent it on education or manufacturing processes, consumer products, research on dealing with the pesticide problem in food, fuel efficient cars, photovoltaics, computers. Where'd the money go? You and I can't spend it except on bloated prices. There's a whole lot more dollars around the world circulating because of our military spending. People have a lot of dollars and wonder what to do with them. It's inflation pure and simple. So, instead of a car costing 1800 bucks like it did in '55, it costs \$18,000. It's still the same money, it just takes more of it. But see, we didn't get anything for it. We have to get back to understanding that the only way you can get an economy to move is to produce something that someone else can use. All that research is great knowledge, but what do you do with it? Some of it has worked it's way down, yeah, but if you just take half of that money and spread it around and you'll get a whole lot more for it.

I: I'd like to shift gears for a minute. What kind of relationship would you like to see the U.S. pursue with the Soviet Union?

S: I would like to see the licensing of a whole lot of technology, computers, photovoltaics, toilets, plumbing, you name it, technology transfer. I think in the end we're going to be much, much stronger because of the competition than where we might have been if we don't let this technology transfer take place. I'm thinking of China, too. We'll benefit from it because of the competition. Americans have always responded to competitive things. Sputnik, the space race, the arms race, Pearl Harbor, World War II, we do real well at any kind of competition.

I: You're saying that by transferring technology to the Soviet Union . . .

S: And China.

I: By building them up they will provide competition that we need to strengthen ourselves.

S: Right. We're beginning to respond to Japanese competition now. There's something to be said for being number two. In the next 10 years we're going to be a real different country from what we are now and I think we need to speed that process along. Don't get me wrong, the Soviet Union can't compete with us now economically or militarily and I have a wait and see attitude about glasnost. The whole change that is going on there was brought about by

technology. Their system is archaic. Just look what a computer and a copy machine would do to their system if it got loose. The whole world is faxing to one another and they have to come along. Right now the people who run agriculture in Russia depend on us to give them information about what's going on in their country agriculturally. It's because they lack the basic tools that I have at school to work with 5th graders.

I: Uh-huh.

S: The rules are changing. Technology is changing everything. The Russians have to start catching up and it's to our advantage to help them. There's profit in it. We've been cold-warred to death, but everything's different now. Everything's changing.

I: I'd like to ask you a couple of other questions. In your estimation, what is the primary threat to the security of the U.S. at the present time?

S: Economics. Interest owed. Anybody who understands compound interest and the exponential rate at which compound interest increases as debt increases fully understands that we are nearly bankrupt. The whole world needs to work together to keep the U.S. afloat because if they don't, the worldwide economy could collapse. If tomorrow, they decided that all oil would be sold in yen, we'd be out the window.

I: Are these things you discuss with other family members?

S: Well, my wife and I talk a lot. Not every day, but quite a bit. She's been involved in Beyond War and ESR even longer than I have. We don't talk about nuclear war with the kids; they're too little. The oldest is only 5 now. And we talk with our family. No one else is really active, but we're all in basic agreement, so it's easy to talk. Not that I don't mind a good argument now and then you understand.

I: Is there anything else you'd like to add?

S: No, I don't think so.

## SAMPLE INTERVIEW: PRODEFENSE ACTIVIST

I: You believe the likelihood of nuclear war is "very unlikely" by the year 2000. I'm interested in what leads you to that conclusion.

S: Well, deterrence, and I don't think the Russians or the U.S. wants the risk, really. I think they'd be more apt to surround us or threaten us than to start bombing us.

I: So, you believe the U.S. and the Soviet Union are in agreement as to the risk of nuclear war and neither side wants to risk that.

S: No I don't.

I: If the U.S. did become involved in a nuclear war, how do you imagine it might happen? What is the most likely scenario?

S: Probably over some other country, NATO countries, West Germany, or something else. I don't think they'd just attack the U.S. But we'd have to go to the defense if a NATO country was attacked.

I: So we might go to the defense of one of our allies if they were attacked.

S: Uh-huh.

I: Who might attack them? The Soviet Union?

S: Maybe. Just like they went into Afghanistan or anything that's nearby. In fact, I'm surprised they haven't gone into Czechoslovakia and some of these

countries that are trying to get a little more independent now, like they did before. Before they took tanks in and just mowed them down.

I: It's been 20 years since the Soviet Union invaded Czechoslovakia. If they did something like that today, do you think the U.S. would respond?

S: No. They didn't then. Maybe should've, but they didn't.

I: If a nuclear war were to begin, do you think it would happen quickly and unexpectedly, or do you think there would be a gradual escalation of tensions?

S: Well, if they were going to attack, I think they'd do it suddenly, because, well, that would give them a better chance. Just like Pearl Harbor, they would surprise us.

I: Do you think there would be any warning signs that informed people might be able to see?

S: I don't know. The element of surprise would be so important. They could do so much with a first strike. They could practically wipe you out.

I: You mentioned earlier that it might begin over some third country. Do you think that if the Soviet Union were planning to invade Western Europe they would simultaneously send missiles to the U.S.?

S: No. I think they'd just go in, like they did in Afghanistan until it got to the point that the U.S. just had to fight back.



I: If there was a nuclear war that involved the U.S., what do you think the consequences would be for you and your family?

S: I'm optimistic. I hope we'd survive. First thing, my sons would go. It would depend on where they bombed. If they just bombed around Portland, we might be able to escape to the hills and fight back however we could. I'd be optimistic.

I: What did you say about your sons?

S: I've got four sons. I'm sure they'd be called right away to fight.

I: Are they in the service now?

S: No, but three have been in.

I: You're optimistic about survival?

S: Uh-huh.

I: How about long-term survival? What do you think things would be like maybe five years down the road?

S: Well, nuclear war wouldn't last long. It couldn't last long. It would be over mighty quick I'd think. So, in five years they'd be trying to rebuild whatever's left.

I: But the war itself wouldn't last long.

S: I wouldn't think so.

I: And in five years, survivors would be rebuilding.

S: Yes.

I: Have you ever considered the possibility of nuclear war when making decisions about the future, such as where to

live, and so on?

S: No. No, I don't really think it's very likely, but it's something to think about. Switzerland has miles of tunnels and shelters to protect their people, so I think the U.S. should have something.

I: You would favor programs like that.

S: Uh-huh.

I: This leads to my next question: What, if anything, do you think the average person can do to protect themselves from the effects of nuclear war?

S: I think they can elect people and work for people who will keep the country strong and try to prevent war.

That's the main thing I would try to do. And then at home you might try to fix your basement or something in hopes you might survive. I guess in Hiroshima some people who were under cover did survive.

I: The main thing is to be active in politics and elect people who will keep the country strong?

S: That's what I think. Peace through strength is the way and not to tempt them by weakness.

I: What do you think the average person can do to help prevent nuclear war?

S: We've got to elect people who will keep the country strong. We can talk and negotiate, but make sure we have a lot of strength behind us. Negotiate from strength.

I: In you own words, what kind of nuclear and defense

policies do you support?

S: I would support S.D.I. I think it would work. I was just reading an article and the man said when an Afghan rebel could shoot down a plane with a Stinger missile he didn't see why any technology couldn't work to shoot down incoming missiles or whatever. You know, it would be a different technology, but when technology can do that, I don't see why it wouldn't work. In fact, they have shot down a launch in 1984. But now they have laws against testing, thanks to our congressmen. Our state's legislators have been really bad it seems to me. They make laws to stop us from testing. They only affect us, they don't affect Russia or anyone else.

I: So S.D.I. is one program you support. Are there other programs you support?

S: Well, I think we need to keep everything strong, the Stealth bomber we should build and the B-1 missile [sic]. There's always newer and better things. We need the research anyhow.

I: What kind of relationship do you think the U.S. government should pursue with the Soviet Union?

S: My preference is to be friendly, but verify! I wouldn't really trust them, but we can try. We need to verify any treaties.

I: What kind of treaties would you like to see?

S: Well, the last one they made to get rid of the

intercontinental missiles, the INF treaty, I would be a little worried about that one, and our ability to verify it. And I think they should do their best to verify it and any other treaties like that. It's good to make them it they'll live up to them, but I wouldn't really trust them to.

I: Are you referring to some type of on-sight verification?

S: Yes. That's what they have now. But they have so much stuff underground and it's such a big country, and there are just certain sites we can visit and they can visit. I still don't feel too safe about it.

I: What do you consider to be the primary threat to the security of the U.S. at the present time?

S: Now I'm a little bit afraid of the weakness within the country, the people who would refuse to fight and who would refuse to go along with anything the government wants, and who want to weaken our defenses. I think that's a danger to the country, and for other countries to see. The same is true with the C.I.A. Other countries are afraid to trust us with their secrets anymore. Some congressmen will talk, whatever the secret. Some of our internal problems are a danger.

I: You mentioned Congress and the CIA and people who aren't supportive of the U.S., who wouldn't fight . . .

S: Yes, like in Viet Nam.

I: Do other members share your concerns?

S: Not very much.

I: Is your husband interested in these things?

S: Not too much. He always says, "There's nothing you can do about them". He doesn't understand my trying to get involved in working with these things. My sons are busy now. They're working and raising families. They may be concerned because two of them have sons, but it's not something they're too active in or anything.

I: Have you had family conversations about these things?

S: Not too much.

I: Do your children know how you feel about these things? Have you talked with them?

S: They know I'm involved, but they think I'm wasting my time when I'm in there typing and writing letters and doing all these things.

I: Do they disagree with you?

S: No. I don't think so. They're just not active. Maybe they will be at some time, but they're not right now.

I: This concludes my questions. Do you have any other thoughts or comments?

S: No, I don't think so. I don't feel like an expert on any of it. When I went to college I majored in history and I think history is one thing, like from Carthage on, and I can remember when Chamberlain went to Munich and gave the Germans a good part of Czechoslovakia for peace in our

time. That was appeasement. And I can remember there were Japanese diplomats talking in Washington, D.C. at the same time their planes were there to bomb Pearl Harbor. That's why I don't have too much faith in negotiating treaties. I think they should do that, but at the same time they should verify and not trust them. And back it up with strength enough that if they don't abide by the treaty we can protect ourselves.

I: Trust is a real problem. Do you have ideas about how the U.S. and the Soviet Union can learn to trust each other more or do you think that's dangerous?

S: Well, I could hope it would work. But I want to stay strong and verify. And then they aren't the only threat. There are a lot of Third World countries and terrorism; a lot of other threats besides the nuclear threat, poison gas, etc. Small countries can be a threat, too.

I: And many smaller countries either have nuclear weapons or are working on them.

S: That's true. I don't think the Soviets are the only threat. And I think they're also a threat just by espionage, in Nicaragua. If they can make it communist. And Cuba's communist, and if they can come up into Mexico with communism I think they can spread the ideology. That's a threat without the weapons even. It's a dangerous world. That's why I think we should stay strong. To protect ourselves against whatever.

APPENDIX E

TABLES

TABLE 1  
DEMOGRAPHIC CHARACTERISTICS

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Variable	Group			
	ANA	ANN	PDA	PDN
Age (M)	43.9	46.7	50.2	48.9
Gender (n):				
male	7	9	9	8
female	8	6	6	7
Education (n):				
high school grad	...	...	1	3
some college/tech	1	3	9	5
college grad	7	3	4	6
postgrad degree	7	9	1	1
Occupation (n):				
student	1	...	2	...
retired	2	1	...	2
homemaker	1	...	1	4
skilled/technical	...	2	5	4
professional	8	12	6	5
fulltime activist	3	...	1	...
Political Affiliation (n):				
Republican	...	...	14	13
Democrat	12	12	...	...
other	1	3	1	2
no preference	2	...	...	...
Liberal/Conservative (n):				
very conservative	...	...	2	4
conservative	2	1	10	8
moderate	1	1	1	1
liberal	6	5	...	...
very liberal	4	4	...	...
neither	2	4	2	2

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ANA = Antinuclear Activist  
ANN = Antinuclear Nonactivist  
PDA = Prodefense Activist  
PDN = Prodefense Nonactivist



TABLE 2

COMPARISON OF MEAN SCORES FOR PRODEFENSE (PD) AND  
ANTINUCLEAR (AN) GROUPS ON 16 POLICY ISSUES

Policy	PD	AN	F
SDI	4.83	1.57	375.57*
Mutual Freeze	2.59	4.67	60.58*
Arms Treaties	2.28	4.63	98.57*
Citizen Relocation	3.34	1.70	41.38*
Unilateral Freeze on Testing	1.66	3.87	65.47*
Unilateral Arms Reduction	1.53	3.87	75.22*
Civil Defense Shelters	4.17	1.57	190.12*
Strong Military	4.73	2.17	133.88*
No First Use	3.00	4.60	27.15*
Nuclear Weapons Research	3.77	1.47	141.22*
Conventional Arms Research	3.93	2.33	45.95*
Groundbased ABM	4.43	2.23	122.95*
Decreased Military Spending	1.93	4.73	255.92*
Missile Withdrawal	2.20	4.60	108.32*
Technology Transfer Restrictions	4.60	4.72	.57
Strategic Arms Treaty	3.63	4.87	26.40*

\*  $p < .001$

TABLE 3

GROUP ESTIMATES OF THE PROBABILITY OF NUCLEAR WAR  
BY THE TURN OF THE CENTURY

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	ANA	ANN	PDA	PDN
Not Possible	0	0	0	1
Very Unlikely	1	2	8	6
Fairly Unlikely	7	5	3	3
Fairly Likely	4	6	1	2
Very Likely	3	1	2	1
Almost Certain	0	1	1	2

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