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DEVELOPMENT OF ACTIVISM: THE ELDERS OF THE ANTI-NUCLEAR MOVEMENT

by

EMMA OGLEY-OLIVER

Under the Direction of Gabriel Kuperminc

ABSTRACT

The US anti-nuclear movement formed in opposition to the development of nuclear weapons and energy. Anti-nuclear activists have rallied since the late 1970's opposed to the construction of Plant Vogtle near Waynesboro, Georgia due to the social and environmental justice issues related to the nuclear industry. In 2010, the nuclear industry proposed a nuclear resurgence in the US, proposing to construct new reactors at Plant Vogtle. This represented the first time new nuclear reactors had been proposed since the moratorium on new reactors as a result of the partial meltdown at Three Mile Island in 1979. The aim of the study is to understand the experience of "first wave" anti-nuclear activists in Georgia (those engaged for twenty years or more). Bronfenbrenner's Ecological Framework was employed to locate anti-nuclear activists' perceived facilitators and barriers to their activism. Semi-structured interviews with these activists yielded rich descriptions about their experience in the anti-nuclear movement. Activists

endorsed facilitators and barriers related to individual characteristics however, the majority of activists perceived facilitators and barriers beyond the individual level. Specifically, the majority of activists mentioned facilitators and barriers relating to the media and political systems and the power and resource imbalances within society. The role of community psychology is discussed in relation to this field of inquiry.

INDEX WORDS: Anti-nuclear activism, Bronfenbrenner's Ecological Framework, Community psychology

DEVELOPMENT OF ACTIVISM: THE ELDERS OF THE ANTI-NUCLEAR MOVEMENT

by

EMMA OGLEY-OLIVER

A Dissertation in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

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2012

DEVELOPMENT OF ACTIVISM: THE ELDERS OF THE ANTI-NUCLEAR MOVEMENT

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DEDICATION

I would like to dedicate this manuscript to all anti-nuclear activists who tirelessly strive for social and environmental justice. These activists prompted this investigation and without their collective energy and engagement it would not have been possible. I hope that this work is useful to attract and sustain anti-nuclear activists so that the movement continues to thrive.

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CHAPTER ONE

1. Literature Review

This study explored the development of anti-nuclear activism among 'elders' of the movement—those involved for 20 or more years. To provide some context for the study, I will first discuss the broader debate about the use of nuclear power. This will include discussion about the recent and historic shift in U.S. energy policy that calls for the construction of new nuclear reactors as a means to address global climate change (GCC), coined a 'nuclear renaissance' by nuclear proponents and a 'nuclear relapse' by opponents[1] (Culley & Angelique, 2010). I will then provide an overview of the roots of the anti-nuclear movement and associated environmental justice issues and social costs. Next, I will define 'activism' and briefly review extant social sciences literature about activism in general across disciplines and issues, with a focus on literature within the field of psychology. Finally, I will discuss scholarly literature that is specific to anti-nuclear activism published in the social sciences, focusing on literature from community psychology. A fundamental goal of community psychology is to promote individual and community well-being and social justice, and understanding the nature and process of anti-nuclear activism is consistent with this goal (Culley & Angelique, 2011). Ultimately, this study sought to understand what factors are perceived to promote or prevent anti-nuclear activism.

In keeping with a community psychological perspective, the ecological framework (Bronfenbrenner, 1979) was used as a guiding heuristic to ultimately understand elder activists' experiences within the anti-nuclear movement. Specifically, this framework allowed the researcher to locate the multiple levels of influence that are perceived to affect individuals' activism. This study focused on the experiences of long-term anti-nuclear activists in Georgia. Such a study is timely, given that the first new reactors to be commissioned in decades are

[1] In the proposed study, this will be referred to as a 'nuclear resurgence.'

proposed to be built at Plant Vogtle, near Waynesboro, Georgia (Culley & Angelique, 2011; Culley, Ogley-Oliver, Carton, & Street, 2010). A key aim of this study was to uncover the events and processes that were perceived to have facilitated or prevented these elders' activism as early as the 1970's and late 1980's when the first reactors were proposed and constructed at Plant Vogtle, respectively (Nuclear Regulatory Commission, 2011).

1.1. Nuclear Resurgence

In January of 2006, the U.S. nuclear industry initiated a nuclear resurgence by proposing the construction of new nuclear reactors. This represented an historic shift in U.S. energy policy, in that no new reactors had been commissioned since the 1979 accident at Three Mile Island (TMI), near Middletown, Pennsylvania. The Bush and Obama Administrations asked Congress to appropriate billions in taxpayer-based federal subsidies as an incentive for the construction of these new reactors. Most recently, in February of 2010, President Obama announced that the operators of Plant Vogtle, near Waynesboro, Georgia, would be the first to receive $8.3 billion in federal loan guarantees (Federal News Service, 2010 February 16). The new Vogtle reactors, if completed, would add to the 104 commercial nuclear reactors that currently operate in the U.S. and supply approximately 20% of US energy. In his FY 2012 budget, President Obama called for an additional $36 billion for nuclear loan guarantees, though debate is ongoing.

Given the uncontrollable release of elevated levels of radiation that continue at the Fukushima Dai-ichi nuclear plant in Japan, debate about federal monies to fund new nuclear reactors is likely to continue. In March of 2011, a tsunami hit the north coast of Japan, which led to power outages in the area including the Fukashima nuclear power plant. A failure in backup power for the cooling systems for the nuclear reactors set into motion a series of events that released large quantities of radiation, including what appears to be the complete meltdown of

three of the plant's six nuclear reactors. The escalating situation in Japan has led to increased debate about nuclear energy. For example, the German government recently announced that it will phase out nuclear energy production by 2012 and Switzerland, Venezuela, and China have suspended the construction of new nuclear reactors (Beckow, March 2011). Back in 1979, the partial meltdown of unit 2 at Three Mile Island instigated a moratorium on the commissioning of nuclear reactors in the US. The Obama administration continues to support new reactors in the US; however the meltdown at Fukashima may ultimately shift US energy policy away from nuclear energy. The recent shift in US energy policy toward nuclear energy is rooted in concern about climate change.

Global Climate Change According to the Intergovernmental Panel on Climate Change (IPCC), there is overwhelming scientific agreement that global climate change (GCC) is related to ever increasing ecological disruptions with potentially life-threatening consequences (IPCC, 2007). In particular, the IPCC has highlighted the importance of addressing the human role in precipitating and perpetuating GCC – particularly via our use of fossil fuels. Within this context, interest in new nuclear reactors in the US and abroad surfaced before the incident in Japan and continues in many countries due to increased concerns about GCC. Because nuclear power plants emit less greenhouse gases (a major cause of GCC) during normal plant operations than other forms of electricity generation, such as coal-fired plants, it has been argued that the construction of new nuclear reactors will provide a solution to GCC, despite evidence that this notion is problematic at best (Culley & Angelique, 2010, 2011; Culley et al., 2010; Makhijani, 2007). For example, disputes exist about how many new reactors it would take to affect GCC. Specifically, the U.S. would need to construct more than 300 nuclear reactors and at least 1500 new reactors would be needed worldwide to achieve even slight reductions in greenhouse gas emissions

(IEER, 2006; Makhijani, 2007). This would require a new reactor every one to two weeks until about 2050, which is unrealistic, given the length of time it takes to license and build nuclear reactors (Makhijani, 2007).

Despite questions about the role nuclear power might play with respect to GCC, in the U.S., there are currently about 30 new nuclear reactors proposed. The majority (23) of these are to be built in the southeastern U.S. in communities with existing nuclear power plants (NRC, 2010). This nuclear resurgence has re-awakened the anti-nuclear movement. Further, the continuing aftermath of the meltdown at Fuskashima in Japan incites activists to mobilize.

1.2. Anti-nuclear Movement

While anti-nuclear activism has resurfaced in the past five years to oppose the nuclear resurgence (and most recently, in response to the March 2011nuclear meltdown that occurred at the Fukushima Dai-ichi Plant in Japan), the anti-nuclear movement has a long history of resistance to the nuclear industry in the U.S. and elsewhere. In the U.S., the movement began in the mid-1940s, with opposition to nuclear weapons development and testing (Siracusa, 2008; Wittner, 2009). It also has roots in nuclear energy production of the 1950s and its related activities, such as uranium mining and processing, reactor licensing, construction, operation and decommissioning, and management of highly radioactive spent fuel wastes (Price, 1982; Wellock, 1998). The longevity of anti-nuclear activism was reinforced with the infamous nuclear disasters at TMI in 1979 and at Chernobyl in 1986. The recent disaster at the Fukushima Dai-ichi Plant brought widespread publicity to concerns about nuclear technology and although yet to be empirically assessed may have strengthened the movement. Opposition to the nuclear industry and its programs among anti-nuclear activists was rooted in discussion of the social costs (health, environmental, and financial) of such programs and events. In relation to the mining of uranium

and the placement of new nuclear reactors these costs have disproportionately affected indigenous peoples and poor communities of color (Alldred & Schrader-Freshette, 2009; Bullard, 1990; Pasternak, 2010) signifying the social and environmental injustices of the nuclear industry.

Social and Environmental Injustices According to the NRC (2010), the vast majority of new reactors are proposed for the southeastern U.S. Many of these locales (like Waynesboro, Georgia) tend to be poor communities of color that are economically dependent upon the nuclear industry and already disproportionately burdened with radioactive and other toxic wastes (Alldred & Schrader-Frechette, 2009; Bullard, 1990; Culley & Angelique, 2011). Environmental injustices associated with the nuclear industry are pervasive, particularly related to the contamination of Native American lands due to uranium mining, processing, and waste disposal (Churchill & LaDuke, 1983; Pasternak, 2010).

Alldred and Shrader-Frechette (2009) highlighted historical injustices related to the nuclear industry stating the public health risks largely affecting indigenous peoples and poor communities of color. For example, public health information about uranium was not widely disseminated among Navajo uranium miners (Dawson, 1992; Pasternak, 2010) and thus Navajo people only organized in protest after 1973, once miners and others living near mining and enrichment sites developed cancer (Brugge & Goble, 2002). It appears that uranium mining and related processes had a negative affect primarily on indigenous people in the U.S., due to lack of alternative employment (Brugge & Goble, 2002) and the fact that the majority (70%) of uranium is located on native lands (World Information Service on Energy (WISE), 2006). Furthermore, since existing nuclear reactors are predominantly located in poor communities, this can lead to radiation exposures above daily permissible levels outlined by federal environmental and public health officials (Alldred & Schrader-Frechette, 2009). Taken together, these examples document

on-going social and environmental injustices associated with the nuclear industry (Alldred & Schrader-Frechette, 2009; Bullard & Johnson, 2000; Culley & Angelique, 2011; Ogley-Oliver, Zorland, & Culley, 2007; Pasternak, 2010). These social and environmental injustices are further delineated when the entire scope of social costs of the nuclear industry is considered.

Social Costs of the Nuclear Industry Since the inception of the nuclear industry, scholars have documented numerous social costs that have driven the anti-nuclear movement. Social costs include those related to human health such as cancer (Aamodt, 1984; Boice, Cohen, Mumma, Chadda, & Blot, 2008; Gilliland, Hunt, Pardilla, & Key, 2000; Wing, Richardson, Armstrong, & Crawford-Brown, 1997), leukemia (Spix, Schmiedel, Kaatsch, Schulze-Rath, & Blettner, 2008), birth defects (Johnson & Rouleau, 1991), and psychological stress (Fleming, Baum, Gisriel, Gatchel, 1982; Cleary & Houts, 1984; Culley, 1998; Culley & Angelique, 2003; Prince-Embury & Rooney, 1987a; Prince-Embury & Rooney, 1987b). Environmental costs include air, water, and soil pollution (Georgia Department of Environmental Protection Division, 2004). Additional social costs include a history of economic problems in part due to construction cost overruns, reliance on public funding, and the lack of private insurance for the nuclear industry, which is wholly funded by taxpayers as outlined in the Price Anderson Limited Liability Act (Culley & Angelique, 2011; Culley & Angelique, 2010). The magnitude of negative outcomes associated with the nuclear industry has fueled the anti-nuclear movement for over 70 years.

Past and current work of the anti-nuclear movement reflects efforts conducted by other social movements seeking to rectify social and environmental injustices. Individual activists make up the core of social movements (Stern, Dietz, Abel, Guagnano, & Kalof, 1999) as those who ultimately strive to promote democracy (Giddens, 1985) and gain control over political authorities (Tilly, 1985) via collective social action.

1.3. Activism

1.3.1. Definition

Scholars have used numerous terms to describe individual and collective action to bring about social change, including 'civic engagement' (Lukasik, 2003), 'civic activism' (Alexander, 1994), 'civic mobilization' (Cable, Walsh, & Warland, 1988), 'political participation' (Walsh, 1988), 'public participation' (Culley & Hughey, 2008), 'citizen participation' (Culley & Angelique, 2011; Florin & Wandersman, 1990), 'collective action' (Olson, 1971), 'citizen involvement' (Cable, 1992), 'active citizenship' (Angelique & Culley, 2010; Condor & Gibson, 2007), 'committed activism' (Stern, et al., 1999) or simply 'activism' (Culley, 1998). Here, I primarily use the term 'activism' to reflect the process of individual involvement in the anti-nuclear movement.

Activism may include protest, direct action, and/or civil disobedience as discussed by Stern et al. (1999). Activists are differentiated from 'supporters' or 'free riders' (see Walsh, 1988) of social movements, who partake in less risky activities such as providing monetary donations, letter writing, and/or public support for policies advocated by activists (see Steel, 1996). Instead, activists are distinct from such groups, as they are "committed to public actions intended to influence the behavior of the policy system and of the broader population" (Steel, 1996, p.82). Examples of activism are well documented in the social sciences.

1.3.2. Activism Literature

Numerous disciplines have discussed factors thought to influence activism. The *Journal of Social Movements* is inter-disciplinary in scope and disseminates findings about political, cultural, and social movements and related activism worldwide. As noted by Giddens (1991), individual activism often occurs within one of four broad social movements: democratic, labor,

ecological, and peace. Activism may seek to rectify injustices pertaining to poverty (Loffredo, 2001), gender (Naples, 1998; Ryan, 1992), race (Reed, 2005), ability (Goodley, 2000), and ecology (Gould & Schnaiberg, 1996), to name a few. I will briefly review activism discussed in extant social sciences literature outside of psychology (e.g., political science and sociology). However, I will focus primarily on activism published within the field of psychology. Generalist, developmental, political, and community psychologists provide noteworthy discourse about activism.

Activism Explained outside of Psychology It is important to note that a substantial amount of literature relevant to activism is published outside of social sciences, and academia altogether. Relevant academic literatures that discuss activism include public health (Cwikel, 2006), women's studies (McWilliams, 1995), and social work (Zakiya Newland, 2007), to name a few. A review of the full range of these sources is beyond the scope of this current study. However, I will briefly describe activism discourse within the fields of political science and sociology because it appears that the majority of activism research is discussed within these two disciplines.

Political scientists have used blame attribution theory to explain activism. For example, Javeline (2003) suggested that individual action might only arise when individuals perceive that the source of grievance is a result of a specific and identifiable entity. Conversely, diffusion of blame negates an individuals' ability to act. In a similar vein, sociologists, Snow, Burke, Rochford, Worden, and Benford (1986) stated that activist organizations engage in framing to help define issues. In sum, activists (and activist organizations) not only engage in framing to define the problem but also aspire to attribute the cause of the issue at hand, lay blame on a specific entity, and deem this entity responsible for the issue. This attribution process incites action.

Sociologists have traditionally used social movement theories to explain how individuals coalesce to produce social change. For example, within the realm of social movement research, the resource mobilization theory (Gamson, 1975; Tilly, 1978; McCarthy & Zald, 1973; 1977) explains activism as a product of knowledge, money, labor, support, and legitimacy. Resources distributed between, and interactions within, organizations either dictate or hinder protests within society. This theory postulates that protest is a result of individual deprivation and grievances about a particular situation *and* the presence of structure and social networks that facilitate individual action (Cable, 1992; McAdam, 1986). Likewise, Verba, Schlozman and Brady (1995) found that faith based groups provide opportunities to participate in civic action. For example, organizational structure and capacity is likely to facilitate activism whereas lack of structure and opportunity for individuals to engage and gain skills may prevent individual activism. Similarly, Harris (1995) and Pattillo-McCoy (1998) described the rich networks and resources within the Black church that facilitated activism. In sum, research published outside of psychology that is focused on activism suggests that there are many factors beyond the individual that promote or prevent activism.

Activism Explained within Psychology The field of psychology varies in its level of analysis regarding interventions and this is no different with respect to activism, an intervention to bring about social justice (Watts, Griffith, & Abdul-Adil, 1999). Traditionally, literature in psychology has focused on individual determinants of behavior. However, subfields of psychology such as political psychology and community psychology tend to focus on social factors beyond the individual to explain behavior.

At the individual level, Stewart and Healy (1989) noted that an individual's developmental stage dictates how an individual perceives and acts upon a social event. This

perspective is akin to Erikson's stages of development (1968), whereby Stewart and Healy suggested that experiences in adolescence affect identity formation. In addition, adults' experiences may affect their perception of opportunities, which may work to re-define their identity and in turn influence an individual's motivation to act. In line with this developmental stage theory, Duncan and Agronick (1996) found that age influenced activism in the Women's movement. Specifically, they found that older people were more likely to act. Similarly, Chen (1992) found that older people rather younger people are more likely to participate in activism due to the availability of time generally afforded to people later in life. Steward and Healy (1989) found that socialization processes might influence activism. Specifically, acceptance of socially defined gender roles was associated with non-action and pro-war attitudes. Conversely, Steel (1996), Mohai (1992), and Steger and Witt (1989) reported that women were more likely to engage in activism. Steward and Healy also found that modeling of parental war-related activism influenced students' support or opposition and engagement in war-related activism. Furthermore, numerous researchers found that within the US, people with higher socioeconomic status are more likely to participate in activism (Erikson et al. 1991; Verba & Nie, 1972; Verba, Scholzman, & Brady, 1995). Pierce et al. (1992) found this especially salient among environmental activists.

Keiffer proposed a developmental perspective to understand activism, or what he coined 'participatory competence,' whereby empowerment was viewed as a long-term process of adult learning and development. This model describes how "formerly politically ineffectual individuals reconstruct their personal and social realities to become assertive and committed grassroots activists" (1984, p. 11). Keiffer sought to understand the process of being powerless to becoming socio-politically empowered and found that the process of empowerment led to participatory competence. Keiffer proposed four distinct phases of involvement. The first

involves an “era of entry” (p. 18) whereby an individual alters their ideas about the workings of authority via conflict and engagement. Secondly, the “era of advancement” (p. 20) facilitates individuals’ appreciation for social and political contexts via participation in the community organization. Thirdly, the “era of incorporation” (p. 23) involves developing a new, more mature and aware identity due to increasing self-esteem and competence related to one’s sociopolitical environment. Lastly, the “era of commitment” (p. 24) speaks to the stage where individuals have fully realized their participatory competence and work to hone their skills in leadership to mobilize the sociopolitical illiterate to become socio-politically literate.

In a similar vein, Watts and colleagues outlined an overarching developmental framework to understand adolescent activism, namely sociopolitical development (SPD) (Watts, Griffith, and Abdul-Adil, 1999; Watts, Williams, & Jagers, 2003). SPD involves individual and societal levels of influence (Moane, 2010; Watts, et al., 1999; 2003). This framework suggests that individual characteristics such as cognitive components influence individual action, which in part is realized with a perceived inequitable social condition. Specifically, an individual’s sense of empowerment (self-perception of competence), efficacy (individual and collective control), and critical consciousness (heightened awareness) concerning an issue is expected to influence their sociopolitical behavior. Furthermore, throughout this reflective process, individuals are likely to change their analysis of the problem at hand, considering influential factors beyond the individual. Analysis of the problem from multiple perspectives may affect individuals’ perceived control to resolve the issue, which may influence individuals’ motivation to act. Watts et al. (1999) also reinforced previous findings that an individuals’ spirituality may play an important role in activism.

In sum, extant literature suggests that multiple factors influence individuals' activism. As Stokel (1992) noted, numerous levels beyond the individual influence behavior. Thus, analysis of behavior driven by individual level factors as well as beyond the individual appears to be important to understand the development of activism. Relevant to the current study, while previous scholars have identified a range of factors that influence activism, no one has specifically used the ecological framework (Bronfenbrenner, 1979) as a heuristic for understanding activism broadly, or anti-nuclear activism more specifically. Thus, this study was designed to uncover how the multiple levels outlined by Bronfenbrenner influence anti-nuclear activists' development. These levels include the microsystem (e.g., family, neighborhood, community organization), mesosystem (the linkages between two microsystems), exosystem (media and political systems), and macrosystem (cultural norms, values, and beliefs).

Among other phenomena, this framework has been used extensively to understand student development within schools (Eccles & Roser, 2010). For example, a students' family or school (their microsystem) may influence their academic development. Furthermore, the linkages between the students' microsystems (namely their mesosystem), such as parent-teacher relationships may influence development. Educational policies outside of the students' immediate environment described as a component of their exosystem may also contribute to the development of the student. Finally, cultural values about school may further affect student development. This framework was used is locate the facilitators and challenges to anti-nuclear activism in Georgia. Analysis of this phenomenon under this framework may increase our understanding about specific factors that are salient to anti-nuclear activism, and will add to the existing literature about anti-nuclear activism.

1.3.3. Anti-nuclear Activism Literature

Scholarly literature about anti-nuclear activism has primarily focused on individual response to nuclear disasters. Specifically, numerous scholars have studied activism in response to the partial meltdown at Three Mile Island (TMI) (Cable, Walsh, & Warland, 1988; Walsh, 1983; Walsh, & Warland, 1983) and the nuclear disaster at Chernobyl (Harper, 2001). In addition, community psychologists have worked to understand the process of becoming and staying active in response to the disaster at TMI (Culley, 1998; Culley & Angelique, 2003; Culley & Angelique, 2010).

Shortly after the disaster at TMI, concerned residents formed social movement organizations to monitor cleanup activities and protest the re-start of unit 1 at TMI. Some residents became very active to this end whereas other residents became free riders. Walsh and Warland (1983) collected survey data, compared these two groups, and found that the majority of residents opposed to TMI were free riders. These free riders reported self-interest as a reason for not becoming more active and noted "stronger neighborhood solidarity and trust in God protect[ed] them in their daily lives" (p.776). Activists, as opposed to free riders, showed more concern about nuclear issues before the disaster (increasing their negative ideology about the disaster), which may have led to increased solidarity under the resource mobilization theory, as proposed by Walsh and Warland.

Cable, Walsh, and Warland (1988) surveyed activists within four local social movement organizations that formed in response to the disaster at TMI. These authors attempted to identify two pathways to activism. They found that activists in Newbury Township and Middletown were careful not to offend fellow neighbors and workers at the plant and essentially became politically ineffective. Conversely, activists in Harrisburg and Lancaster, many of whom had prior social

movement experience and thus developed mistrust for political entities, created new networks and activated old networks to respond to this disaster.

Walsh (1988), a sociologist, documented citizen mobilization immediately after the disaster at TMI and noted residents' ability to act as watchdogs and advocate for more stringent safety standards. Specifically, the increased resources from being part of a group, as opposed to fighting alone, were found to increase individual activism. New activists noted that this structural capacity made it easy for them to 'plug in' and learn the issues at hand. Walsh (1988) found that this structural capacity increased new activists' ability to identify leaders, develop legitimacy, develop camaraderie, and a support system.

In 1998, Culley conducted a qualitative study that explored perceived transformation regarding personal, familial, and political arenas of everyday life among 10 women involved in anti-nuclear activism 20 years after the disaster at TMI. Culley noted that women developed an understanding of nuclear technology and the effects of radiation on developing fetuses and the human body, which gave women a sense of control over how to react to misleading media reports. Personally, women stated that the process of gaining knowledge and developing skills to respond to the misleading claims communicated by the industry was empowering; this empowering process maintained their desire to remain activists. In terms of family relationships, women stated that support and understanding from their husbands and families was vital for them to stay active.

Women noted some negative aspects related to their activism. Specifically, women described overwhelming stress, anxiety, and exhaustion due to lack of sleep and over-extending themselves with monitoring activities and everyday responsibilities in life, such as family commitments. In addition, the women explained that they felt that the nuclear industry was

privileged, possessing the power to do as they wished due to protection from the government. Women underscored the importance of participating in the political process because of this inequitable distribution of power given to the nuclear industry.

In 2003, Culley and Angelique reported on these same women's gendered experiences as long-term TMI activists. Women reported that their initial activism represented self-interest for their immediate family; however, continued activism represented a desire to protect the wellness of the larger community. Women noted that motherhood was a catalyst for their activism but that greater understanding of sociopolitical events sustained their involvement. Due to their gender, women felt that the male- dominated NRC did not take them seriously. Women stated that they were perceived as uneducated and non-contenders in disputes against the industry; however, women used these negative attributions as transformative experiences inciting them to learn more and become effective leaders and public speakers, activities that were viewed as typically afforded to male activists. Furthermore, women noted that their increased knowledge about the issue and resultant sense of power maintained their activism.

Culley and Angelique later conducted follow-up interviews with 26 long-term TMI activists as part of an ongoing research effort to document activists' perceptions of national policy change calling for new reactors. These data, published in 2010, described three major themes that concerned activists as they recalled the history of the nuclear industry and the new proposals. Specifically, activists described problems with the nuclear technology such as the social costs previously described in relation to the nuclear industry. Furthermore, activists noted frustration about proposals for new reactors because they felt that no one had learned from the disaster at TMI. For example, citizens' over-consumption, illiteracy about nuclear power and the government and industry's ability to shape public opinion were viewed by activists as allowing

citizens to forget about the disaster at TMI. Finally, in light of these new proposals, activists articulated hopes for a sustainable future, which involved changing energy policy and increasing citizen participation to realize a world without nuclear power.

In 2011, Culley and Angelique published findings about public participation at federal public meetings specific to new nuclear proposals. These public meetings were focused on the proposed new reactors at Plant Vogtle and the re-licensing of the Unit 1 reactor at TMI. Culley and Angelique used participant observation techniques to explore how social power theory could be used to explain citizen participation and environmental justice issues related to these new proposals. Data from these two public meetings helped to illustrate how dimensions of social power (Lukes, 1974) shaped citizen participation and how "consensus" could be manipulated via control of resources, barriers to participation, agenda setting, and shaping conceptions. Findings revealed what the authors described as troubling implications for citizen participation and environmental justice.

In sum, the literature focused on anti-nuclear activism within community psychology has explored various topics relevant to anti-nuclear activism. This literature includes investigation into how women's long-term TMI activism was perceived to have transformed their personal, family, and political lives and the gendered experiences of long-term activism (Culley, 1998; Culley & Angelique, 2003), narratives from long-term TMI activists related to new energy policies (Culley & Angelique, 2010), and the influence of social power on citizen participation in federally-mandated processes for new nuclear proposals (Culley & Angelique, 2011). These published works highlighted various factors that appear to influence the development of activism; however, none were focused specifically on facilitators and barriers to activism. Furthermore, whereas extant research has illustrated how factors beyond the individual have shaped various

forms of activism, Bronfenbrenner's (1979) ecological framework has not been used as a heuristic to locate barriers and facilitating factors that influence the development of activists generally or the development of anti-nuclear activists specifically. The current study worked to fill these gaps in the literature. Ultimately, the study aimed to document perceived barriers and catalysts to activism to understand how numerous settings such as family, community-based organizations, political systems, and cultural norms and interconnections between these settings may prevent or facilitate activism.

1.4. Rationale

The goal of this investigation was to increase understanding of the complex factors that influence the development of anti-nuclear activism. To date, extant psychological literature has not included an assessment of the barriers and facilitators to anti-nuclear activism. I used Bronfenbrenner's (1979) ecological framework as a guiding heuristic to understand elder activists' experiences within the anti-nuclear movement in Georgia. Specifically, it was expected that this framework would allow for a greater understanding of the multiple levels of influence that are perceived to affect individuals' activism. The assessment of long-term anti-nuclear activists is timely given the ensuing nuclear resurgence in the US. Documenting the experiences of 'first wave' elders of the anti-nuclear movement in Georgia provides an opportunity for researchers and practitioners to learn about how individuals are motivated to act and understand what circumstances sustain and prevent activism.

An aim of community psychology is to promote social justice and activism is an avenue to this end. Specifically, Condor and Gibson (2007) proposed that individuals participate in their local community with an intention to create a more just world. Further, a fundamental goal of community psychology is to promote individual and community well-being, and understanding

the nature and process of anti-nuclear activism is consistent with this goal (Culley & Angelique, 2011). Anti-nuclear activists have attempted to right the social and environmental injustices associated with the nuclear industry for over 70 years. Given the disproportionate focus on the southeast for new reactor proposals, a pattern of environmental injustice appears to exist (Alldred & Shrader-Freschette, 2009; Bullard, 1990). Understanding the experience of anti-nuclear activists in the southeast at this time is a worthy goal.

1.5. The Current Study

This research examined the development of activists within the Georgia anti-nuclear movement. A qualitative case study design allowed for an in-depth exploration of elders' experiences and the perceived barriers and facilitators to anti-nuclear activism. Understanding anti-nuclear activism specific to Georgia is a timely research topic, due to the proposals to construct two new reactors at Plant Vogtle, in Georgia. These proposals represent a nuclear resurgence, the first time the nuclear industry has commissioned nuclear reactors since the 1979 TMI accident. Of particular interest is how elders' perceptions of barriers and facilitators to activism can be located in reference to the ecological framework. Understanding which individual and societal level factors are perceived to influence activism is an important goal, in light of this nuclear resurgence.

CHAPTER TWO

2. Method

A qualitative case study design with a community narratives focus was utilized to record the rich descriptions of elders' own experiences specific to their development within the anti-nuclear movement. As proposed by Denzin and Lincoln (1998) and Yin (1994) a community case study approach allowed for rich description and analysis of complex phenomena in a particular context such as anti-nuclear activism in Georgia. Furthermore, a narrative research methodology was used to "describe the story… [and the] set of experiences" (Creswell, 2007, p. 156) among elders of the anti-nuclear movement. The units of analysis included the individual experiences of elders within the anti-nuclear movement that coalesce to define the movement as perceived by activists in Georgia.

This qualitative approach mirrors previous research focused on environmental activism (Culley & Hughey, 2008; Keiffer, 1984; Krauss, 1993; Pardo, 1990) and anti-nuclear activism, specifically (Culley, 1998; Culley & Angelique, 2003; Culley & Angelique, 2010). Keiffer (1984) noted that by employing a qualitative approach, researchers might accurately understand grass-roots activists' journeys from powerless individuals to powerful collectives via documentation of their development as activists. Furthermore, Culley and Angelique (2010), and Culley and Hughey (2008) explored activism using this methodology and underscored its value as a methodological approach. Specifically, Culley and Hughey (2008) noted that "the open-ended nature of [this] method allow[s] for a rich and unrestricted unfolding of….experiences" (p. 21). The narratives research approach is consistent with others who have explored similar phenomena (Culley & Angelique, 2010; Harper, et al., 2004; Mankowski & Rappaport, 2000) in that it serves to empower particular groups to tell their own stories on their own terms (Rappaport, 1995). The documentation of narratives (both unique to particular individuals and those that span

the group) allowed particular stories to be known and accessible. These stories may also serve as a valuable resource for researchers and communities (Harper, et al., 2004; Mankowski & Rapparport, 2000).

2.1. Participants

Ten activists were identified as 'first wave' elders of the anti-nuclear movement in Georgia. These elders had 'extensive involvement' in anti-nuclear activism, which was defined as those who continued to be engaged in various anti-nuclear activities, including community organizing, meeting or demonstration attendance, civil disobedience, legal intervention related to nuclear facilities and/or information dissemination to the public, press, or policymakers. Those who were only tangentially involved in the anti-nuclear activism (e.g. those who only attended a couple of meetings etc.) were not interviewed. Thus, each participant had been involved in the anti-nuclear movement for more than 20 years, resided in Georgia and was still active in the movement. Participants were recruited by email (two activists received a follow-up telephone call due to their lack of response to emails). One activist refused to participate in the study and another did not respond to either emails or phone calls. A snowball sampling technique (Henry, 2009) generated two additional elders who were contacted and these activists subsequently agreed to participate. As proposed by Henry, "nonprobablility samples are often used very effectively in qualitative research designs" (p. 81). Participant recruitment is more fully described below in "Procedures."

Of the ten activists who agreed to participate, seven were women and all were of European descent. Age of activists' at initial involvement in the anti-nuclear movement ranged from 20 to 48 years (M=32 years old) and length of involvement in the movement ranged from 23 to 44 years (M=32 years). Age range of initial involvement for females was larger than the

age range of initial involvement for male activists, 20 to 48 years and 23 to 34 years, respectively. All activists indicated involvement in at least one organization throughout their activism. Half of the participants lived within the city limits of Atlanta, Georgia and half lived in semi-rural areas in Georgia. Activists' homes in semi-rural areas were closer to nuclear reactors than activists living in Atlanta but their proximity to reactors was not considered to be in these activists' immediate locales. These 10 activists are representative of "first wave" elders of the anti-nuclear movement in Georgia in that few lived immediately around nuclear reactors and the majority of long-term activists identified for this study were of European decent.

Activists were asked to respond to demographic questions to paint a picture of their personal life (see Appendix B). Nine activists directly responded to these questions, though only partial information was provided by one activist. Eight of the 10 activists were married at the time of the interview, and all but one activist had children. Activists were asked about their income, education, and occupational status to get a sense of their socioeconomic status. All of the responding nine activists graduated from high school, the majority earned a bachelor's degree (n=8), one held a masters degree, and one activist noted that she earned 'all but dissertation' (ABD) status in a PhD program. Three elders noted an income of over $50,000, two activists earned between $50,000 and $40,000, two activists between $30,000 and $20,000 and one activist noted earning a salary of less than $10,000.

2.2. Procedures

To gain entry to this community of elders, and in partial fulfillment of practicum requirements for my doctoral program, I began volunteering with local environmental and anti-nuclear organizations in the fall of 2006. Over the past four years, I have participated in local and national events where I have observed anti-nuclear activists in action, many of whom are 'first

wave' elders of the movement. With the assistance of Nuclear Watch South (NWS), the oldest grassroots environmental organization in Georgia, and the only one focused on anti-nuclear issues, activists who were active in the anti-nuclear movement in Georgia for more than twenty years (i.e., 'first wave' anti-nuclear activists) and who continue to be involved in the movement, were identified and contacted for an interview. NWS moderates an on-line listserv email exchange where activists communicate about their anti-nuclear efforts. With direction from NWS personnel, this on-line forum made it easy to identify, contact, and recruit elders of the movement for participation in the study.

This study is part of a larger study that will explore the experiences of 'first wave' elders of the US anti-nuclear movement. The Principal Investigator (PI) and I established initial contact with elders via email and/or phone call and requested to arrange the interview (see Appendix A for the email recruitment script). Interviews were conducted face-to-face in a setting of the participants' choice and at a date and time convenient for the interviewee and interviewer. All interviews were conducted by the researcher (and in some cases, with the PI) over a three week span in April of 2011 and were audio-recorded for subsequent transcription and analysis. All procedures were conducted in accordance with Georgia State University's Institutional Review Board (IRB) guidelines for research involving human subjects. All participants gave informed consent before participating in an interview. Additional consent was obtained to audiotape interviews *and* for elective use of participants' names throughout the study[2], as has been customary in previous studies focused on activists who often wish to receive credit for their work (Culley & Angelique, 2003, 2010; Culley & Hughey, 2008). As stipulated by the IRB, participants were given the option to consent to each of these three requests (see Appendix C).

[2] All participants gave consent to use their real names in association with their narrative.

2.3. Interviews

With consent, all interviews were conducted in-person and audio-recorded. A semi-structured interview technique was used to guide the direction of the interview and to encourage interviewees to disclose information that they deemed relevant to their development within the anti-nuclear movement. The interview technique was modeled after interviews conducted by Culley and Angelique (2003, 2010), Berg (1998), and Culley and Hughey (2008). This technique was chosen because it allows for rich description of elders' experiences related to their development as anti-nuclear activists. All elders were asked the following set of open-ended questions: 1) When, how, and why did you become involved in the nuclear issue? 2) What are the most important things you learned over the years? 3) What are the things that helped keep you involved? 4) What are the things that made it difficult to stay involved? However, I did not assume that these questions represented all relevant questions and this open-ended approach allowed participants to share related experiences and perspectives that the researchers might not have considered (Lincoln & Guba, 1985). To ensure accuracy, audio recordings of interviews were transcribed verbatim for subsequent analyses. Data collection and analyses procedures were consistent with the methods advocated for community narrative work (Harper et al., 2004; Rappaport, 1995; Mankoski & Rappaport, 2000).

2.4. Data Analysis

Audio tapes of interviews were transcribed verbatim. A team of three researchers read the transcripts and gained 100% consensus regarding the coding of these transcripts. Following the work of Berg (1998) and Tesch (1990), we first developed thematic categories that existed within the data that were relevant to the research purpose. Specifically, we identified both anticipated (e.g., catalysts for and barriers to activism) and unanticipated thematic categories.

Secondly, we employed an iterative open coding procedure to identify subthemes that emerged within these categories. These procedures are in keeping with previous researchers who have explored the experiences of activists (Angelique & Culley, 2010; Culley & Angelique, 2003; Culley & Hughey, 2008; Keiffer, 1982; Krauss, 1993; Pardo, 1990). NVivo, a qualitative analysis software program, was used to support qualitative analysis and interpretation of the data collected. Kohlbacher (2006) and Yin (2003a) suggested that analysis in case studies should be couched within theory to better understand what emerges from participants' narratives. As previously described, the ecological framework articulated by Bronfenbrenner (1979) was used as a heuristic to locate the themes that emerge from activists' narratives – and thus – ultimately, to understand their experiences as activists.

CHAPTER THREE

3. Results

Consistent with approaches taken by others who have explored similar phenomena (e.g., Culley & Angelique, 2010; Culley & Hughey, 2008; Keiffer, 1984), data from interviews with key informants were textually analyzed for content (as outlined in the Method section) to identify emerging thematic and subthematic categories that characterized participants' perceptions of facilitators and barriers associated with their anti-nuclear activism. Interviews with elder anti-nuclear activists uncovered rich descriptions about individual and societal factors, situations, processes, and events that facilitated or challenged their activism. Presented here are the major themes and subthemes that emerged from participants' narratives.

Before proceeding, a brief explanation about the strategy employed by the researcher to organize the interview data findings might be helpful. Findings are presented according to thematic and subthematic categories that emerged from these data in the following manner. Thematic categories served as the primary organizing framework for the content of each data set, facilitators and barriers. When data within thematic categories were deemed by the researcher to be diverse enough to warrant designation of subthemes, findings were organized to reflect such. Further, it is important to note that themes were not necessarily mutually exclusive in that one element of activists' narratives may have been coded within two distinct themes.

3.1. Facilitators to Activism

Elder activists of the anti-nuclear movement perceived numerous facilitators or catalysts to their activism. Overall, 8 major themes emerged from activists' discussion about facilitators or catalysts. In order of salience, (as depicted in Table 1) themes included *Personal Learning*, *Individual Attributes*, *People*, *Non-profit Organizations*, *Sociopolitical Climate*, *Media*, *Self Interest*, and *Family Climate*.

Table 1. Major Themes and Subthemes: Perceived Facilitators of Anti-nuclear Activism

Major Themes	**Subthemes**
Personal Learning (100%)	Realization of Larger Issues (10)
	Studying the Issue (8)
	Utility of Small Wins & Small Groups (5)
Individual Attributes (100%)	Collective Values & Spiritual Worldview (6)
	Personality (5)
	Prior Political Engagement (5)
	Self-efficacy (4)
	Socioeconomic Status (4)
	Identification as an Artist (4)
People (100%)	Other Activists (10)
	Professionals (7)
	Colleagues and Friends (6)
Non-profit Organizations (100%)	Organizational Activities (10)
	Organizational Capacity (10)
	Organizational Power (8)
Sociopolitical Climate (100%)	Nuclear Related Events (7)
	Social Movements (6)
	Receptive Politicians (6)
Media (80%)	Magazines/Newspapers (5)
	Books (4)
	Films (3)
	Internet (3)
Self Interest (80%)	Personal Validation (7)
	Personal Harm (4)

Family Climate (70%)	Adult Life (7)
	Upbringing (3)

3.1.1. Personal Learning

All activists described some form of personal learning that facilitated their activism. For the purposes of this research, personal learning was defined as individually-directed processes or experiences that were perceived by activists to have increased their consciousness or awareness of the nuclear issue. Presented in order of salience, *Personal Learning* subthemes included: *Realization of Larger Issues, Studying the Issue*, and *Recognizing the Utility of Small Wins and Small Groups*.

Realization of Larger Issues All activists spoke about how their realization of larger issues had facilitated their anti-nuclear activism. Activists talked about becoming aware about a range of issues related to the nuclear industry. The majority of participants discussed the potential for negative outcomes, including the health and environmental issues inherent with the nuclear life cycle. Activists also talked about those in powerful positions and the broader political system that undergirds the nuclear industry and activists discussed issues related to discrimination and oppression that they associated with the nuclear industry. In addition, activists noted how their increased understanding of the financial underpinnings of the nuclear industry that facilitated their involvement. Finally, a few activists discussed realizing the long term commitment required to address the nuclear issue, which spurred them to maintain their activism. The following direct quotes characterize this subtheme.

Jeaninne Honicker talked about her realizations about broader health implications. She said: “nuclear plants were allowed to routinely release [radioactivity, increasing] cancer and leukemia deaths per year … that’s too high a price to pay for electricity” (p. 3). Furthermore, she

provided examples that highlighted how the information she gleaned about the larger health concerns were a facilitator to her activism "a one-year-old child drinking milk from a cow that grazed near this plant would receive 335 mg of iodine-131 to the thyroid, and the allowable amount was 15 mg" (p. 5). Joanne Steele emphasized her learning about environmental injustices associated with the nuclear industry as a major facilitator of her involvement. She noted:

> The injustice to native peoples from the mining and the pollution of the water … The mining companies a lot of times would just stop and leave once they got the mother load and leave the folks with all the problems…The effects of uranium mining and coal mining on indigenous lands was my introduction into the first phase of the nuclear chain with the mining of uranium, and how it is affecting the people on the land. So, that's where my interest came (p. 1).

Bobbie Paul said, "it was …. the money and the insanity of this whole nuclear escapade … that got our attention because it didn't make sense" (p. 5). Finally, Neill Herring summarized the implications about the complex nature of the nuclear industry stating "There's not going to be any quick resolution. …my initial commitment [was] five years and it's multiplied into many more than that" (p. 27). He realized that if activists were going to effectively counter the powerful interests at play that it would take some time. In a similar vein, Danny Feig Sandoval confirmed "the forces you're working against are so big and powerful" (p. 3).

Studying the Issue The majority of activists described how diligent study of the issue (e.g., reading, attending workshops, meetings, and events) spurred their anti-nuclear activism. For example, activists noted that they had read studies conducted by civic organizations (e.g., the League of Women Voters), which they perceived had assisted in their personal learning of the issue and thus facilitated their activism. The following quotes represent the breadth of response

within this subtheme. Jeannine Honicker noted that she read public documents published by the Nuclear Regulatory Commission at local libraries. She said, "this library was open four hours a day; four days a week…I made trips back and forth. I looked for… the health effects, because this was what I was interested in" (p. 3). In addition, Neill Herring spoke about reading nuclear industry magazines and he said "[it] was the only reliable source [of information] (p. 12). Joan King noted that studying the issue alongside the League of Women Voters facilitated her activism. She said that the "League of Women Voters…had a book on nuclear waste… [from when] they [conducted] a two-year study [and produced a] position paper" (p. 3, 4).

The Utility of Small Wins and Small Groups Activists stated that recognizing the utility of small wins and small groups facilitated their activism. Activists talked about focusing on the process of small wins or attainable goals such as framing the issue to gain attention or engaging politicians. Activists routinely noted the ability of small groups to do this work. The following quotes characterize this subtheme. Betsy Rivard said: "I just feel … on issues like this, your rewards are sometimes elusive and you have to go for the little goals rather than the big goal … So you just have to keep trudging forth" (p. 13). Danny Feig Sandoval noted:

> You have to accept the fact that you might win some battles….but that you have to set your expectations a little bit lower. You've got to keep the bar low and not let it go to your head at that point. [Do] not let that frustrate you to the point that you don't want to [continue activism] (p. 3).

3.1.2. Individual Attributes

All activists spoke about individual qualities that were perceived to spur their involvement in anti-nuclear activism. Seven subthemes emerged, and in order of their salience,

included *Collective Values or Spiritual Worldview*, *Personality Traits*, *Prior Political Engagement*, *Self-efficacy*, *Socioeconomic Status*, and *Identification as an Artist*.

Collectivist Values or Spiritual Worldview Most activists described collectivist values or a spiritual worldview that they perceived had facilitated their activism. These participants expressed values related to eco-centrism (prioritizing nature over humans), being a peacemaker and having a commitment to communal well-being as helping to facilitate their activism. For example, Joanne Steele talked about her spiritual connection to the earth as a facilitator to her activism, stating "Mother Earth is a source of motivation and just the sacredness of life" (p.5). Furthermore, Joan King noted:

> You better have some spiritual backbone or… something more than the material to keep you going…the universe is a living organism…and we're a unit of it…we are individuals…but you have to be able to grow beyond that because man cannot live by himself (p. 12, 17).

Speaking to the collectivist values and spirituality that propelled her activism, Glenn Carroll said:

> There's definitely a spiritual aspect…I always saw the earth as an organic being of its own and we somehow are another piece of some big, grand thing. Our species does not have the right to make this kind of footprint…. I have to stand up… and do something so I can face Mother Earth. Those of us that have faith…and have actually tested that faith, we see a lot of power in it (p. 5, 6).

Finally, Bobbie Paul consistently spoke about the collectivist values she held which she thought had incited her activism. Throughout her interview, she noted her concern for the larger community. For example, she said "I really believe that you need to be a part of a community in

whatever [work] you are doing, not just high art or high ideas or academia. It need[s] to be integrated somehow" (p. 1).

Personality Traits Activists talked about particular personality traits that they perceived had helped to compel their activism. They noted that optimism or positivity had facilitated their involvement and one talked about stubbornness as propelling his activism. For example, throughout her interview, Betsy Rivard routinely expressed an optimistic outlook indicating her overwhelmingly positive of view on the future of nuclear related issues. She said "I … know that …things change. Things go up and down and we didn't have any nuclear power plants [commissioned] in this country for over 20 years. Things change. It's possible to have success" (p. 19). Similarly, Bobbie Paul noted an overwhelming positive outlook on her work as an anti-nuclear activist and said that "I do not really see barriers. Instead there are opportunities to be overcome… when I hear the word barrier, I think like barrier reef or something – the barrier is there but the water flows over it. And sometimes the water gets bounced back for a while. And then I think there's a wave sometimes that kind of pushes it over" (p. 16). Furthermore, Glenn Carroll said "if anybody observed me, they would notice maybe a positivity and optimism…the leap [of faith that] I make… [which] gives me comfort when all appears really dire and hopeless (p. 5, 6). Unique from other activists, Neill Herring said that his stubbornness helped to propel his activism: "I have invested a lot of time and thought and research into the field. … And I was just stubborn about it. I'm right, they're wrong and I'll stick with it and prove it" (p. 20).

Prior Political Engagement Activists mentioned that their prior political engagement had helped to facilitate their anti-nuclear activism. Participants noted previous non-nuclear related activist experiences that included efforts to block the construction of a highway in their local communities and participation in efforts to publish New Left political viewpoints in *The Great*

Speckled Bird, an Atlanta based newspaper. Joan King and Bobbie Paul talked about a long history of prior affiliation with numerous organizations, which they perceived to have facilitated their engagement in nuclear-related organizations. The following quotes are representative of this subtheme.

Joan King said "I've been…on the state board of the Leagues of Women Voters [and] then I was on the National Board of 20/20 Vision" (p.3). Neill Herring recalled his early honing of skills with the Georgia Public Service Commission (PSC, the state utility regulator) prior to being an anti-nuclear activist. This early experience facilitated his engagement in activities at the PSC related to the nuclear issue. He said:

> When I was at the S[tudents for] D[emocratic] S[ociety] at Georgia State [University], we had fought the old Atlanta Transit Company [due to] …steady raises every 3 months …[in] bus fare …in '68-'69. And so, I had experience at the Public Service Commission, so we went down there and started opposing the power company (p. 1).

Self-efficacy Participants perceived self-efficacy or confidence in their ability to be a productive and competent activist as something that facilitated their involvement. Adele Kushner and Tom Ferguson spoke about their confidence in writing letters to the editor and engaging the public through their writing in other ways. For example, Adele Kushner stated: "It's really been an educational thing. I have gotten educated and learned stuff …that's been a motivator to keep on going because you … see your development and knowledge. And you can see that it could be done. There are not any barriers" (p. 24). Danny Feig Sandoval said: "I felt so good about knowing that stuff. I really knew it. It's amazing how knowledge is really power. I was really confident about it" (p. 18).

Socioeconomic Status (SES) Activists indicated that their socioeconomic status (SES) helped to facilitate their activism. Of these activists, three noted that their education (more specifically, their interest and aptitude for science, art, and critical thinking) had compelled them to be anti-nuclear activists. Furthermore, three activists noted that their income level had helped to facilitate their activism. For example, Joan King noted, "My husband supported me and so I had leeway to do a lot of these things. … So being a reasonably, affluent housewife [helped]" (p. 9). Bobbie Paul stated that not having to worry about money facilitated her activism. She said "I didn't have too much of the desperation of not knowing where my next [meal] was coming from" (p. 39). Thus, her affluence allowed her to focus on activism instead of putting food on the table. Similarly, Adele Kushner indicated that her ability to take early retirement gave her increased time that spurred her involvement.

Identification as an Artist Activists described how their identification as artists helped to stimulate their activism. These activists noted that they incorporated the nuclear issue into their artwork and writings. For example, Joan King stated that art was a creative outlet that maintained her involvement. She perceived that this identification as an artist was a common thread across activists. She noted: "so many people who have been activists are also artists [like] Glenn Carroll" (p. 6). Another quote that is representative of this subtheme was from Glenn Carroll. She said:

> I started as a volunteer [with] an art career. The spiritual thing [is] kind of hardwired to my impulse as an artist [and the] creative process of making something beautiful and communicat[ing] without using standard language [facilitated my anti-nuclear activism]. Some of my deepest diving on trying to problem solve [was through producing] art ….I see resolving this problem as a creative project (p. 6).

3.1.3. People

All activists listed a range of people who were perceived to have helped facilitate their activism in the anti-nuclear movement. Three subthemes emerged here and in order of salience, these included *Other Activists or Mentors*, *Professionals*, or *Friends and Colleagues*.

Other Activists or Mentors All activists mentioned other anti-nuclear activists and / or mentors as facilitating their activism. These people varied in terms of the length and breadth of their engagement in the anti-nuclear movement and some of these activists are no longer engaged in the movement. As previously noted, Neill Herring and Bobbie Paul was engaged in many types of activism prior to their nuclear activism and talked about how fellow activists roused them and others to engage in nuclear related issues. The following quotes capture this subtheme. Neill said "Jeanie Shorthouse… said they are applying for a license for a new nuclear plant at Augusta and we should oppose [it]" (p. 2). Bobbie said "I did not go to [hear Helen Caldicott speak but] people like Bobbie Wrenn Banks and Ruth Boozer and Cherry Clements …went to hear and said 'Oh my God. Life has changed for us with this realization. And we really have to do something about this'" (p. 3), which incited Bobbie to get involved. Joan King talked about mentors such as Glenn Carroll who facilitated her anti-nuclear activism on a day to day basis when writing or preparing a speech due to her accessibility and wealth of knowledge about the details of nuclear related issues. She said "Glenn Carroll has a fantastic memory [and] I don't. I never depend upon my memory [but] I depend upon Glenn's" (p. 5).

Professionals The majority of activists indicated that professionals such as economists, psychologists, artists, medical doctors, attorneys, politicians, and philosophers had helped to facilitate their activism. These professionals were perceived by activists to have questioned the utility of nuclear power with respect to social, environmental, and financial costs of the energy

source. For example, among the economists mentioned here were Kenneth Galbraith and Hazel Henderson - proponents of sustainability. Danny Feig Sandoval discussed the influence of numerous professionals that influenced his activism. He said:

> A Ralph Nader conference called "Taking Charge in the '80s" [with] people like Kenneth Galbraith, the economist and Hazel Henderson, Derek Shearer (a state congressman from California) [were talking about the] book called "Social Democracy" [and] alternative transportation, alternative energy. I mean, all [these ideas were] incredible. And I thought 'this is a cool stuff' …. Everybody there was talking about how we've got to start running people at local election levels. So I run for the state senate in 1980 on the Citizens Party ticket (p. 12).

Tom Ferguson said: "Noam Chomsky was a big influence. … Chomsky opened my eyes to who really runs things here. I sort of intuited things a lot but he just lifted the veil" (p.6). Furthermore, Tom mentioned B.F. Skinner and his concerns regarding pollution, overpopulation, and nuclear warheads; he later read Chomsky's critique of Skinner's ideas.

Friends and Colleagues Most activists listed a selection of friends and colleagues who facilitated their anti-nuclear activism. Friends and colleagues mentioned by activists included neighbors, friends and colleagues who resided near nuclear reactors, and fellow co-workers. The following quotes are representative of this subtheme. Joanne Steele noted: "I had a midwife whose husband was a [local] pastor. He … said 'you know the Presbyterian Church has just started a peace-making program and it focuses on the nuclear freeze right now, and I know that's one of your concerns'" (p. 2). Neill Herring talked about the support of his non-activist colleagues when they agreed to go down to the Georgia Public Service Commission (PSC) in the middle of a workday. He stated:

> The power companies just filed for an emergency rate increase for $25 million. I was working as a carpenter… [and] the [PSC staff] called me out on the job…I took all the guys I was working with…6 fellow contractors …and we went down to [the PSC] in our work clothes… our presence delayed the rate increase (p. 3).

3.1.4. Non-profit Organizations

All activists stated that non-profit organizations helped to facilitate their anti-nuclear activism. Non-profit organizations listed by activists included anti-nuclear energy, anti-war, and political organizations. For example, among the non-profit organizations mentioned were: Physicians for Social Responsibility (PSR co-founded by Helen Caldicott), Campaign for Prosperous Georgia (CPG), Nuclear Watch South (NWS, formerly Georgians Against Nuclear Energy (GANE)), and Georgia Women's Action for New Directions (GA WAND) to name a few. In order of salience, activists' narratives were organized into the following three subthemes: *Organizational Activities*, *Organizational Capacity*, and *Organizational Power*.

Organizational Activities All activists talked about organizational activities, events or actions that they perceived to have facilitated their activism. Activists talked about their engagement in lobbying efforts and their attendance at demonstrations, organizational meetings, fundraising events, workshops, and state and federal hearings. Activists talked about lobbying politicians either at official hearings or arranged meetings with their elected officials. The majority of activists mentioned participating in public demonstrations, attending organizational meetings, and discussed writing letters to newspaper editors and elected officials and having interviews with radio and newspaper staff on behalf of an organization that facilitated their involvement. The following quotes are representative of this subtheme.

Adele Kushner noted that participating in these types of activities facilitated her involvement because "it's fun ….and interesting. It doesn't have to be a specific social event… [but simply about] 'How are we going to have a meeting?' " (p. 7). Danny Feig Sandoval stated "We had great fundraisers … dances and we had several hundred people show up" (p. 4). Furthermore, he said that these types of activities were important for him to maintain a balance between work and play and to prevent burnout. Other organizational activities that activists mentioned as helping to spur their activism included their participation in group email listserves. For example, Adele Kushner perceived the No Nukes Ya'll listserve as helpful in providing activists with the latest information to read and disseminate. She said "Getting information [from the listserve] always helps…I'm glad to have the information right in front of me…it's quick and easy" (p. 22, 23).

Organizational Capacity All activists discussed the organizational structure such as roles, relationships and networks that afforded participants to engage in activism. Everyone described holding numerous roles such as a board member, volunteer, coordinator, or executive director (the majority were unpaid), which kept them plugged into anti-nuclear activism. For example, Glenn Carroll stated that as the NWS coordinator she was charged with organizing an intervention in response to nuclear activities, which kept her engaged. Most activists stated that developing relationships with likeminded others and potential allies motivated their activism. These activists spoke about attending to the needs of others, feeling a sense of belonging, and mentioned that their ability to share history with other activists allowed them to realize that they were not alone, which facilitated their anti-nuclear activism. Finally, Adele Kushner described the organizations' capacity to provide a physical location for activists to convene, which facilitated her activism. The following quotes characterize this subtheme.

Bobbie Paul talked about the development of paid roles within Georgia WAND (by gaining 501 c-3 status), which allowed her to be consistently present and stay engaged as an anti-nuclear activist. She said "if I'm going to spend my time doing this… we have to have some accountability and we really need to have consistency …and that only comes from having staff people because as much as you have great intentions [people's focus will likely stray if they have to make a living elsewhere]" (p. 3). Bobbie Paul also noted that paid leadership roles within a non-hierarchical structure…allowed for inclusivity, which she thought had helped to facilitate her activism. Glenn Carroll noted that importance of networks between organizations made possible by paid roles had facilitated her activism. She said:

> Georgians Against Nuclear Energy had been part of a collective [with] Campaign for a Prosperous Georgia (CPG) [that was] energy-oriented. … [CPG] had [paid] staff [and] were very important in my life. They are my main mentors on understanding the nuclear [issues]. I think it really helped me sort of catch the rhythm of activism (p. 2)

Danny Feig Sandoval talked about how organizations provided a forum for people to make relationships with fellow activists, which prevented him from burning out. He said:

> Tim Johnson and I had a discussion in the early '80s about burnout and just said to each other – we're just going to watch each other. Make sure we don't burn out on this. It's so easy to get sucked into all … this stuff. Tim and I … saw each other like all consumed by the stuff, day and night (p. 12).

Organizational Power The majority of activists discussed how organizational power facilitated their activism. This subtheme spoke to perceived power as an outcome of organizational activities (e.g. actual action) and organizational capacity (e.g. roles, relationships,

and networks). Participants talked about the power of small organizations to set trends and accomplish their goals. The following quotes are representative of this subtheme.

Betsy Rivard spoke about the power of the Alliance for Nuclear Accountability (ANA), an national umbrella organization working to unite anti-nuclear organizations. As a product of engaged and organized individuals, ANA organized to secure appointments for over 25 years with politicians to influence nuclear related policy decision-making, which has facilitated activism. Joanne Steele noted the power of organizations working together on the Nuclear Test Ban Caravan. She said:

> The Nuclear Test Ban caravan was a success … in stopping the underground testing for nuclear weapons in the US…because everybody [was] working towards it …I do think having the religious community behind that movement in this country really helped … the Christian perspective has a lot of clout in this country (JS, p. 2, 3).

3.1.5. Sociopolitical Climate

All activists described how particular sociopolitical climates motivated their activism. This theme involved societal or political events that occurred before or throughout activists' involvement. In order of salience, three subthemes emerged, including *Nuclear Related Events*, *Receptive Policy- and Grant-makers*, and *Social Movements*.

Nuclear Related Events Most activists noted that nuclear related events had spurred their involvement in the anti-nuclear movement. For example, activists spoke about industry activities such as the construction of Plant Vogtle in Georgia which began in the late 1970s, perceptions of incompetence and industry "spin", and a lack of industry oversight by federal and state officials. Two activists said that nuclear industry disasters, such as Chernobyl, Three Mile Island, and more recently Fukushima, further incited their involvement. Ultimately, activists' perception that

the industry was unable to make sound judgments financially or in relation to safety had incited their involvement. The following quotes characterize activists' comments related to this subtheme:

> Two units at Hatch [nuclear power plant near Baxley, Georgia] were under construction and the rate increases were designed to support capacity additions… based on assumptions that were unsupportable…The one thing that keeps me motivated is just being perpetually infuriated by the[ir] … lying …. Outright falsehoods [about the need for more energy] (Neill Herring, p. 2, 21).

Jeaninne Honicker talked about an instance when she thought the Nuclear Regulatory Commission (NRC) changed their regulations to fit the interests of the nuclear industry, indicating that this infuriated her and only further incited her activism. She said "filters [could be used] on the ventilation system …to reduce the radioactive releases …. [but] instead of [the] NRC enforcing their guidelines and regulations, they abolished [the requirement]" (p. 5). Glenn Carroll recalled that the disaster at Three Mile Island initiated her involvement, and she reflected on two subsequent disasters that continued to fuel her activism. She said "I mean the amount of radioactivity getting out of Fukushima right this minute changes everything … it changes the future [like Chernobyl did]. And that's really bad" (p. 5).

Social Movements In addition, most activists indicated that various social movements working to address perceived injustices in US had facilitated their development as anti-nuclear activists. These included the civil rights, peace and environmental justice movements. Activists spoke about their awareness of racial tensions and the civil rights movement, which led them to be concerned with other social and environmental injustices in society, and participants talked

about how their work as peace activists maintained their anti-nuclear activism. The following quotes characterize the nature of participants' narratives relevant to this subtheme:

> I grew up in Georgia, in the south, and I was politically aware from a young age because of the growth of the Civil Rights Movement and the fact that it was just an overwhelming fact of a life, the American way…. [and] I became an anti-war activist early against the Vietnam War (Neill Herring, p. 1).

Joanne Steele described how her activism grew from her concern about continued injustices to native people in the US. She said "I was concerned … about history and…the relationship of the US with the indigenous people of the Americas …[I was aware of] a lot of mining and threats of mining uranium [such as] pollution and the use of scarce water on Native American lands" (p. 1).

Receptive Policy- and Grant-makers Finally, most activists talked about how, at various times, favorable climates involving receptive policy- and grant-makers helped to facilitate their involvement. Activists noted grant-makers who recognized their work by giving them money, which in turn was perceived to have facilitated their activism Furthermore, activists mentioned how President Carter's political appointment of Dave Freeman (who shared some of the anti-nuclear activists' concerns) to the board of directors for the Tennessee Valley Authority (a commercial nuclear power program in the US) had facilitated activism in the anti-nuclear movement. Another activist noted more recent policy-makers, such as Inez Triay (appointed by President Obama as the Assistant Secretary for Environmental Management to the Department of Energy) and Judge Hawkens the Chairman of the Atomic Safety and Licensing Board who were open to hear concerns of grassroots activists. The following quotes characterize this subtheme. Jeaninne Honicker said "[We] went to the first board meeting … of Dave Freeman's [and in response to residents' concerns] he … interview[ed] the employees [and got] 5,000 safety

complaints [submitted to] the Safety Nuclear Review Team. He shut every … nuke down" (p. 7). About receptive grant-makers who were perceived to have facilitated anti-nuclear activism, Neill Herring said "charitable Yankees gave us some money … to work on the rate cases. … and then energy got to be a big issue nationally … and so more money started coming in and we were staffed up" (p. 2).

3.1.6. Media

The majority of activists cited the media as a facilitator of their anti-nuclear activism. Activists described reading a range of publicly communicated ideas and opinions via magazines, cartoons, films, and books that were perceived to have influenced their anti-nuclear activism. In order of salience, four subthemes are presented here, including *Magazines/Newspapers*, *Books*, *Films*, and the *Internet*.

Magazine/Newspapers Activists talked about a range of magazines and newspapers which inspired their activism. This included publications from the nuclear industry, the peace movement, mainstream news, and underground news outlets. The latter sources included politically progressive satirical cartoons, which one activist said spurred his activism. Tom Ferguson talked about a few alternative media sources or underground newspapers (e.g. *Kaleidoscope* in Milwaukee) and said:

> I saw this cartoon of this devastated city, a nuclear holocaust. And this guy is walking around with a TV looking for a place to plug it in. I thought that was excellent cartoon. That issue, that's the first I can remember being hooked by the nuclear issue (p.1).

Glenn Carroll talked about reading non-violence literature, which facilitated her anti-nuclear activism and Jeannine Honicker said that she read industry publications to keep informed, which allowed her to maintain her activism.

Books Activists also noted that specific books motivated their activism. Books ranged in topic area including spiritual, behavioral, political, energy production, peace, and nuclear war. Participants read books written by behavioral and humanistic psychologists, B. F. Skinner and Kenneth Keyes respectively, and read about nuclear war. Further, activists discussed influential books about energy production. Jeaninne Honicker talked about how her concern about nuclear energy grew after reading *Poison Power* by Dr. John Goffman, known for his research on the human health effects of radiation exposure. An activist mentioned reading texts about politics and peace. Another spoke about reading spiritual texts written by Eckhardt Tolle and Thomas Berry – and specifically, how these books helped to facilitate his anti-nuclear activism. The following quotes characterize this subtheme.

Jeaninne recalled one passage from *Poison Power* that struck her "Goffman said that if everybody received as much radiation as nuclear plants were allowed to routinely release, or received the allowable dose, that there would be 32,000 additional cancer and leukemia deaths per year" (p. 3). Tom Ferguson said:

> Eckhart Tolle… brings together a lot of the things that attracted me [to the movement] through what I would call my awakening. If I could put it in a nutshell, the ultimate activism is to just become -- just to be present, cultivate presence. As a person who is present, you're connected to -- you recognize your inner connection and then you'll know what to do (p. 3).

Films A few activists listed films that roused their involvement in anti-nuclear activism. These films ranged from block buster films to those produced by non-profit organizations seeking to prevent nuclear war and proliferation. Joan King noted watching the *China Syndrome*, a fictitious story about a near nuclear meltdown, released three weeks before the partial

meltdown at Three Mile Island. She mentioned that she watched it again recently after the disaster at Fukashima, which yet again reinforced her anti-nuclear activism. Jeannine Honicker recalled being [introduced to the] film called *Energy the Nuclear Alternative*. Another activist spoke about watching *The Last Epidemic: Medical Consequences of Nuclear Weapons and Nuclear War*, which included presentation excerpts from a conference hosted by Physicians for Social Responsibility and how this incited his activism.

Internet Activists also stated that the internet helped to further engage them in anti-nuclear activism. Participants talked about the convenience of using the internet to search for nuclear related information. For example, Adele Kushner said, "Getting information always helps… I'm glad to have the information right in front of me [via the internet]…it's quick and easy (p. 22, 23). Tom Ferguson talked about posting his nuclear and political writings and songs on the internet, which he thought had facilitated his activism. He also noted "The [Nuclear Watch South] site Glenn is working on is there. … When I have a specific question, I go looking for it, but I have actually browsed many anti-nuclear websites and there's a lot of good stuff there" (p. 8).

3.1.7. Self-interest

The majority of activists discussed facilitators that related to self-interest. These motivating factors spoke to individual activists' needs and/or desires such as *Personal Validation* or *Potential Personal Harm* resulting from nuclear technology.

Personal Validation Activists spoke about other people validating their work and concerns, which they perceived to have motivated their activism. These activists indicated that they felt validated when they were asked to contribute their skills to help the anti-nuclear movement in its efforts to educate the public (e.g., producing art work, educating children on the

issue, or writing for the general public). The following quotes describe this subtheme. Glenn Carroll stated:

> I think maybe I have actually reached a level in my own personal development as an anti-nuclear activist that is recognized by my peers that has made my life a little easier in a lot of ways because I do have some sort of respect (p. 8, 9).

Adele Kushner mentioned feeling personal validation because her children had indicated to her that they were proud of her work as an activist. She recalled that her kids said "I was proud to be growing up in a house when you had all these meetings. You always had people sitting in the living room and it was so interesting hearing … the discussion" (p. 6). Adele emphasized that this was a big motivator to pursue her activism. In addition, Jeannine Honicker spoke about the pleasure she experienced when she spoke with a politician who corroborated her concerns about the nuclear issue. Simply put, these activists suggested that when their work was validated by others, this made them feel good and that they were doing the right thing to protect future generations.

Potential Personal Harm Activists also described how their perception of potential personal harm from nuclear industry activities had incited their involvement. Participants were concerned about health and safety hazards due to the close proximity of their homes to nuclear related activities. For example, Danny Feig Sandoval lived near train tracks which were a major transportation route for radioactive materials. He said:

> I had just moved [to the area] and I was riding my bicycle down …DeKalb Avenue…and I saw a train car had skipped the tracks…I just thought, well, what if [this were] a train car carrying hazardous materials? So I decided to [investigate] the emergency plans [in

> the case of an accident]. … I got really involved because I [was] concerned about all the nuclear…and hazardous materials going through my neighborhood (p. 1, 2).

Joanne Steele was concerned about her children and their inheritance of the nuclear issue. She said: "You know with having children and seeing what kind of a world we're leaving them…that's why we're concerned…and [that's why I'm] doing my part…we should act in doing what we know is best" (p. 3). Finally, Neill Herring talked about the financial harm of rate hikes proposed by Georgia Power as an instigator to his anti-nuclear activism.

3.1.8. Family Climate

Most activists talked about family circumstances that encouraged their activism. This theme captured two time points in the activists' lives, childhood and adulthood. Thus, in order of salience, two subthemes, *Adult Life* and *Upbringing*, emerged from participants' narratives that were related to the family climate theme.

Adult Life Activists who talked about family climate discussed how particular circumstances in their adult life had facilitated their activism. Participants noted that they had supportive partners and family members. The following quotes are representative of this subtheme.

Of her husband, Glenn Carroll said "[He has] become one of my greatest collaborators… he's a great sounding board. What was one of my biggest challenges has now become a huge assist" (p. 2.8). Joanne Steele said:

> My father worked for Martin Marietta … to support a family with seven children. … He felt like building these weapons and working in the Military Industrial Complex was a way of protecting his family and protecting his country and being patriotic…. He said they had contaminated the land where they developed the weapons and …now they don't

> know what they're going to do. Before he died, he said … he was doing what he felt was right to protect his family and his country but that he realized what I was doing was also a means to protect the human family and to protect the earth…working for peace and anti-nuclear and no war and all of those things. And [he said] I had his blessing because of the way they had gone about it had caused more problems… I think that was one of the most important things that happened in my life as an anti-nuclear activist and [as]…a peace activist (p. 4).

Upbringing A few activists mentioned that circumstances related to their upbringing had facilitated their anti-nuclear activism. Activists mentioned how their father's science background or the values that their parents instilled in them had spurred their interest and subsequent dedication to anti-nuclear activism. For example, Betsy Rivard's father worked at the Oak Ridge nuclear weapons facility in Tennessee. She was encouraged to be a critical thinker about such governmental programs and she said "My family … we're all kind of skeptical… questioning, not willing to take the word from the government as to what's good for you. … So, it just was a natural thing to kind of wonder about [nuclear related issues from an early age]" (p. 2). She said that this upbringing likely influenced her to pursue a job working with radioactive isotopes, where she started to question the safety protocols in place when using such elements, which increased her concern about nuclear related activities and incited her to become an anti-nuclear activist. Bobbie Paul talked about her parents, who instilled in her a strong work ethic and modeled caretaker roles, which she adopts within her work as an anti-nuclear activist. She said:

> My father and mother … worked hard. [My father was a doctor and took] a screaming parent [with an injured] child … and …calmed [them] down [he worked to help] them heal. … and I guess it's just been kind of a catalyst…wanting to keep up [with my

> father]. [It keeps me motivated] to read up on all of the nuclear stuff …so you want to be excellent, but ultimately, you want to help humanity (p. 38, 39).

She said that this mindset growing up had incited her desire to nurture people and attend to their needs and make a difference.

3.2. Barriers to Activism

Elder activists of the anti-nuclear movement perceived numerous barriers or challenges to their activism. Overall, 8 major themes emerged from activists' discussion about barriers. In order of salience, as depicted in Table 2, these barriers included, *Resource and Power Imbalances*, *Sociopolitical Climate*, *Mainstream Media*, *Time Constraints*, *Family Climate*, *Individual Attributes*, *Nature of Subject Matter*, and *Non-profit Organizational Issues*.

Table 2 Major Themes and Subthemes: Perceived Barriers to Anti-nuclear Activism

Major Themes	**Subthemes**
Power & Resource Imbalances (80%)	Financial Resource Imbalance (6)
	Shaping the Issue (6)
Socio-political Climate (80%)	Pro nuclear climate (8)
	Nature of Legislative Bodies (6)
Mainstream Media (60%)	Misinformation (5)
	Lack of Information (4)
Time Constraints (60%)	Required Face Time (5)
	Required Book Time (3)
Family Climate (50%)	Role Conflict (5)
Individual Attributes (40%)	Socioeconomic Status (2)
	Secluded Geographic Area (1)
	Dyslexic (1)
Nature of Subject Matter (30%)	Nuclear Subject (3)

Anti-nuclear Organizational Issues (20%)	Organizational Activities (2)
	Organizational Capacity (2)

3.2.1. Resource and Power Imbalance

The majority of activists talked about power imbalances that favor the nuclear industry as a barrier to their activism. Activists spoke about financial resource imbalances and the industry's ability to shape the nuclear issue. In order of salience, activists discussed *Financial Resource Imbalances* and *Shaping the Issue*.

Financial Resource Imbalances The majority of activists talked about the imbalance in financial resources between opponents and supporters of the nuclear industry as a barrier to their activism. Activists stated that most anti-nuclear work is unpaid. Conversely, Joanne Steele noted, "people sitting on the other side, they're getting paid to be there" (p. 10). Neill Herring said:

> The vendors… the electric power industry and their suppliers are among the most powerful interests in this country and in the world. They are a very formidable opponent and they control state power at a lot of levels. And overcoming them is not like a chess match. It might look like that at times, but it's not because they own the board. They'll overturn it if you start to close in, and they're utterly unprincipled (p. 27).

Activists said the corporate financing of politicians represented a challenge to their activism. For example, Bobbie Paul said "The nuclear industry is the second largest lobby on Capitol Hill… there's no way we'd win against this" (p. 14).

Shaping the Issue Most activists talked about the ability of the nuclear industry to shape the issue as a barrier to their anti-nuclear activism. Within this subtheme, a few activists stated how the regulatory processes, influenced by powerful industry, have changed over the years in ways that have challenged their roles as activists. For example, Jeannine Honicker noted the

ability of anti-nuclear activists to more effectively intervene in the process during the 1970's but said, "now they've made it so that it's very difficult for people to intervene, you know. They've made it much more difficult for people to do what we did [30 years ago]" (p. 17). Activists also talked about the nuclear industry's ability to shape history and the public's perception of the nuclear issue by changing the name of nuclear programs or by releasing studies perceived to contain predetermined findings. Glenn Carroll noted "[the industry] used to call [Savannah River Site] Savannah River Plant, but … they changed the name of things to interrupt the history" (p. 16). Betsy Rivard stated:

> The NRC just announced they are going to do some studies around the power plants … they announced … that the reason they're doing the studies is to ease people's fears. I have a degree in science and I know if you already announce that you know the results before you have done the studies, the study is not very valid. It doesn't sound like science. You would say, we're asking the question. Is it okay to live near the nuclear power plant? But part of their PR … it sounds like they know the results (p. 18, 19).

Furthermore, Tom Ferguson discussed the apparent exclusion of relevant and knowledgeable institutions in federal processes dedicated to nuclear issues. For example, activists raised concerns about the Obama administration's Blue Ribbon Commission, tasked with exploring the country's options for storage of the nation's radioactive wastes, noting that it is largely comprised of pro-industry officials with no representation of from those who have openly critiqued the industry's practices. Activists noted the influence of the industry (due to utility lobbying of legislative representatives) on political decision-making. For example, Betsy Rivard indicated that shortly after the Fukushima incident, Georgia Power requested that her

congressional representative (John Lewis of Atlanta) not talk to constituents and activists about nuclear energy, which she felt was a challenge to the work of anti-nuclear activists.

3.2.2. Sociopolitical Climate

Most activists talked about how, at various times, the sociopolitical climate has served as a barrier to their activism. This theme captured societal and/or political events that occurred throughout their involvement that were perceived to have challenged their involvement in the anti-nuclear movement. In order of salience, subthemes included *Pro-nuclear Climate* and *Nature of Legislative Bodies*.

Pro-nuclear Climate Activists discussed what they described as a largely pro-nuclear sociopolitical climate in the U.S. that challenged their anti-nuclear activism. Within this subtheme, the majority of activists talked about local and national political and regulatory decision-making that was perceived to be designed to benefit utilities instead of the general public. For example, Joanne Steele said:

> Another thing that I think is a problem is the regulatory setup and the … nuclear regulatory agencies. The fact that you can go to meeting, after meeting, after meeting after meeting that they're setup to be ineffective and just take up your time. … you're invited to come as public participation. But you know that's just … we invited the public because we're supposed to, but really we have already made the decisions…I just … feel somewhat appalled" (p. 10).

Activists also indicated that corporate financing of political campaigns contributed to a pro-nuclear climate that they perceived to be barrier to their activism. Furthermore, activists discussed what they perceived as the unresponsive nature of federal and state policymakers (e.g., the Department of Energy and the Georgia Public Service Commission) as a barrier to their

activism. For example, Neill Herring noted “The Commission work [became] increasingly futile as far as I could tell” (p. 7). Similarly, Joan King said “Forget about the Public Service Commission they are in the pocket of the Georgia Power (p. 5). Unique from others, Tom Ferguson indicated that patriarchal and capitalist values further contributed to a pro-nuclear climate and served as a barrier to his activism. He noted “Nixon and Bush…they’re part of the problem. They work for the wealthy class [which is] a major obstacle…their main interest is in expanding and maintaining their privilege… that’s a major obstacle in addressing these issues” (p. 6).

Nature of Legislative Bodies Activists talked about the nature of legislative bodies, which were perceived to have worked as a barrier to anti-nuclear activism. Within this subtheme, Joanne Steele talked about the frustration associated with changing federal and state employees. She said:

> And sometimes when somebody might start listening to you they might be moved out of that department and put somewhere else. I mean over the years I've seen that happen. That when you start getting to somebody’s ear…then all of a sudden their job description has changed and they’re not in position (p. 10).

Furthermore, Joan King described an instance at a hearing when Georgia legislators did not appear to know the specifics regarding a proposed radioactive waste plan that was scheduled for discussion. Instead, she perceived them to be more interested in making sexist comments to participants. She said:

> We went before the transportation committee in the Georgia legislature. Ed [Arnold from PSR] was there and some people from WAND …a doctor from Emory…she was visibly pregnant at that time. [The male legislators] really started to make fun of her and they

> said ‘all right honey, you be careful with that baby now’ and one other …said, ‘you go home and fix your husband’s dinner.’ It was pathetic. I overheard one of these men talking to a buddy. He said ‘what is this Yucca [proposed radioactive waste repository] those women we’re talking about?’…they didn’t even know what we we’re talking about. I mean they were supposed to make a judgment on whether this radioactive stuff could be on the highways around here and they had no idea what we were talking about….our legislators (p. 8)

A few activists talked about what they described as the ‘politics of fear’ within the Georgia legislature that were perceived to have presented a challenge to their activism. Specifically, Neill Herring and Danny Feig-Sandoval talked about how they viewed the nuclear industry as engaging in fear tactics to influence the legislature in order to push their agenda and expand the industry. Neill Herring said: “[I] was always troubled by the resort to emotionalism and the pandering to fear. I don’t like the politics of fear. That’s fascism to me, it’s the fear of the unknown whether it’s technological or racial or whatever it is. I’m very uneasy with this type of politics” (p. 21). Finally, Glenn Carroll talked about southeastern political conservatism that she perceived to work as a barrier to her activism, noting that the southeastern states are not known for their progressive politics. She discussed the effectiveness of lobbying in different states: “I listen with envy and wonder if I've really been deluding myself or … missing it when you hear from states who have been really effective with their state legislatures. California is upholding a moratorium [on nuclear power]… and then I remember Georgia’s really backwards and we do have a really, really hard region to work in. … It's pretty bad. … with everybody in their [the utilities’] pocket” (p. 10).

3.2.3. Mainstream Media

Most activists stated that the media sometimes served as a barrier to their anti-nuclear activism. This theme was relegated to discussion about the type of information communicated by the media. In order of salience, activists talked about *Misinformation* and *Lack of Information*.

Misinformation Activists noted the frequency of misinformation that they saw presented in mainstream media that was ultimately perceived to legitimize nuclear power. Activists routinely cited such misinformation as a challenge to their activism. A few activists talked about their perceptions of censorship and intellectual dishonesty that illegitimately shaped perspectives of the issue. Tom Ferguson noted that he was once "pro war" because of misinformation and indoctrination from the mainstream media. He said that, at the time, he believed the pro-nuclear propaganda published in the media touting "the peaceful atom [and] too cheap to meter" (p. 5). This misinformation presented a challenge to his early anti-nuclear activism. Since becoming more aware of the industry's public relations efforts, he relies more on alternative media to learn about issues. Similarly, Joanne Steele talked about how the media provided an avenue for mass distraction, which she perceived as a challenge to her activism. She noted "mainstream society is so far removed from concerns of nuclear issues" (p. 6).

Lack of Information Activists stated that a lack of information about nuclear issues within mainstream media was a challenge to their activism. For example, Danny Feig Sandoval suggested that mainstream media did not present a balanced debate on nuclear issues, which he perceived as a barrier to activism. He said:

> We don't have the voice - that gets back to the radio and media. Where is our [voice], who were the spokespeople like Jim Hightower or radio people personalities that can

> speak to this stuff? So to me, what's scary is that you've got to have a balance with voices (p. 22).

3.2.4. Time Constraints

Most activists described the amount of time invested in their involvement as a challenge to their activism. Subthemes included actual time invested in participating in meetings, hearings etc., and the time it takes to learn all the technical and changing information about this issue. In order of salience, subthemes included *Required Face Time or Interaction* and *Required Book Time*.

Required Face or Interaction Time Activists discussed the amount of time required to interact with people regarding this issue as a challenge to their activism. This subtheme included activists' challenge of interacting on the anti-nuclear email listserve, sorting through the hundreds of weekly emails posted there, and participating in ongoing legal interventions in opposition to the nuclear industry. A few activists talked about the challenges associated with the anti-nuclear e-mail listservs, given the amount of time and energy they had to invest to meaningfully monitor and engage in them. For example, Bobbie Paul said:

> I do think the whole computer thing is going to be an issue we have to deal with, of so much information. First, those of us who work in this field…some of [the emails are] chatter and some of it's really breaking [news]. … It can keep you from real creative thinking. It can keep you from yourself or time out…to be outside … to reflect (p. 28).

Similarly, Tom Ferguson mentioned that the time he spent interacting on electronic mail (email) inevitably reduced time for having fun and in particular, pursuing his love for art. Glenn Carroll said that the amount of time it took to carry out a legal intervention was "intense" and presented

a challenge to her activism. Finally, activists noted in general terms the long-term commitment that is required for anti-nuclear activism, which was cited as a challenge to their activism.

Required Book Time Activists discussed the technical nature of being an anti-nuclear activist as a challenge. For example, Betsy Rivard noted, "it is a very difficult issue and there is a lot of power on the other side [proposing new programs]. So you just have to keep trudging forth" (p. 13). Tom Ferguson stated that even after reading countless books over the years, he still does not have all facts committed to memory, but he knows where to turn if he needs answers. He said "I poured through all these books … when I worked [with] Ed Arnold [at PSR], and I still don't have it straight like beta particles [versus other types of radioactive particles such as alpha or gamma] or -- but I have a general sense of things" (p. 7). Likewise, Joan King stated that information is "changing all the time" (p. 10), which she viewed as a challenge.

3.2.5. Family Climate

Activists talked about how family climate sometimes worked as a barrier to their anti-nuclear activism. These activists generally perceived barriers inherent in role conflicts (e.g., being a parent, a wife, and an activist). Activists suggested that their spouses regretted the fact that they were activists. For example, Joan King mentioned that her activism interfered with her spouse's desire to remain anonymous. She said:

> Being a reasonably affluent housewife [allowed me to be engaged]. Now what holds you back from doing more is the other half of that. I had a husband, I had three kids, they came first. I didn't often demonstrate and get arrested…out of respect for my husband and my family. [My husband] would like to be totally anonymous…[and] while he's trying to be anonymous, I'm having my name and my address in the newspaper with my picture (p. 9).

Glenn Carroll talked about periodic resistance from her husband about the amount of time she was putting into the issue, noting that her activism took time away from her marriage. She said:

> I was booking the calendar, night after night, weekend after weekend. And the dishes didn't get done… I mean I got married before I became an activist. We had been married a couple of years and suddenly I changed a lot about myself. And he was incredibly tolerant I think, looking back on it. But every now and then, he would just sort of explode and go, 'you're like way less than a wife. You're not even a good roommate. You don't even do the dishes. You're not doing your part of the chores. I should live by myself. I would be better off.' And I knew he was right. And I thought it was actually - in his angry way - I thought he was saying something very loving which is 'I miss you.' And I was moved by that (p. 2.4).

Similarly, two activists stated that because their families had to come first, this sometimes posed a challenge to their activism. For example, Adele noted that her family was often concerned with her safety and questioned her priorities as she maintained her activism. Adele also noted that being a single mother, working full-time, and going to school was a challenge. She noted "The kids were busy and they were in school. It was always a distraction" (p. 6). Danny Feig-Sandoval and Joanne Steele also noted that child rearing sometimes posed a challenge to maintaining their activism.

3.2.6. Individual Attributes

Activists spoke about individual attributes that they perceived had acted as a challenge to their activism. This theme captured information about activists' individual traits and geographic area of residence that were seen as barriers to their involvement in the anti-nuclear movement. Subthemes included *Socioeconomic Status*, *Dyslexia*, and *Secluded Geographic Area*.

Socioeconomic Status Two activists discussed the need to earn money, which made it difficult for them to engage in a largely volunteer movement. These activists were not in a financial position that allowed them to volunteer all of their time to the anti-nuclear movement. Because of this need to earn money, Glenn Carroll described a situation where she initially took the role as a free rider, which stalled her anti-nuclear activism. She talked about being aware of the anti-nuclear movement after the TMI disaster in 1979 but her need to earn money and the perception that the movement "had it covered" led her to pursue a college education. After completing college, Glenn mentioned the need to make money, which made it difficult for her to become active in the anti-nuclear movement. She talked about her expectations about making money because she had a college degree and she said "I tried to get into Corporate America and I became an art director and it was about making money" (p. 2). Tom Ferguson stated that most anti-nuclear work is unpaid, which was a challenge in that "You got to make a living. You got to come up with money. That's always a major distraction" (p. 7).

Dyslexia Joan King disclosed that her dyslexia sometimes posed a challenge to her activism, in that it for example, made it difficult to quickly write letters to the editor. She said:

> I had written a letter to the *Atlanta Journal-Constitution* [about a nuclear issue and when] I began writing letters of that sort [it] was very difficult for me at first because I'm dyslexic, I can't spell and writing - [well] every letter I wrote probably raise[d] my blood pressure. In other words, I took maybe two or three days to send something off instead of [someone else composing a letter in an hour] (p.2).

Geographic Location Adele Kushner talked about how living in a more rural area of Georgia made it difficult for her to meet with other activists, and thus sometimes served as a challenge to her activism. She noted "I really have enjoyed a lot of being in the country [but]

being in the country is a barrier… because I don't drive at night [and] everything [federal and state hearings are usually in Atlanta or in a nuclear facility's host community] you have to drive to. That's a barrier. [But] I get to write stay[ing] home and it doesn't matter" (p. 27).

3.2.7. Nature of the Subject Matter

A few activists talked about how the nature of the subject matter related to nuclear issues sometimes posed a challenge to their anti-nuclear involvement. For example, Tom Ferguson and Joanne Steele mentioned that the material was, by its nature, depressing and therefore a challenge. Speaking to this, Joanne Steele noted that often when she raised the topic with her children they would say that she was being a "downer." Betsy Rivard highlighted a different challenge for activists like her, given the complex nature of the subject matter. In particular, she discussed the challenges inherent in holding the nuclear industry accountable for its history of environmental injustices given the complexities involved in tracking health effects for areas disproportionately burdened by numerous toxins released into the environment by multiple polluters who represent legally distinct entities. She said:

> A barrier would be the fact that in communities where there are weapon sites…the local [Vogtle nuclear power] plants are right across the river from the Savannah River Site… [there are numerous] toxic waste sites in the area …so there is so much a possibility for pollution…it's a kind of a set up so that it would be impossible to actually nail down. If you were very ill and thought 'this is from something in the environment, 'it's pretty impossible to actually say what exactly caused your illness because there are so many different possibilities. So it kind of protects [the industry]. You're able to point your finger at the other industry or the other polluter and say, it's got to be in that one, not me (p. 18).

3.2.8. Anti-nuclear Organizational Issues

A few activists mentioned organizational issues that were perceived to have posed challenges to their activism. These issues related to *Organizational Activities* and *Organizational Capacity*. Within this theme, 2 activists discussed organizational activities and organizational capacity that were barriers to their involvement.

Organizational Activities Activists talked about organizational activities that presented a challenge to their anti-nuclear activism. This subtheme included discussion about organizational activities and relationships that were perceived to have questioned the credibility of the movement. Danny Feig-Sandoval spoke about the need to maintain a balance between fun and seriousness to ensure that the movement is seen as a legitimate entity. He felt compelled to present a strong image of the movement and when he perceived that the credibility of the movement was marred with trivial commentary or personal attacks on opponents, this challenged his desire to remain engaged. He said "When you come across … protesting… There's an image and … how do we shift that image a little bit without losing the fun and variety. … it's hard to do" (p. 3). He also noted:

> I think you need spokespeople that [decide] how far we're going to go with [a specific activity]. About how they're presenting the organization. When you're at a Public Service Commission [meeting], it's rather formal. It's kind of fun sometimes to have the little bit of the loopy side to it, but generally across the board in the room, it doesn't hang well and I realized that. I think that's a barrier for me because it limits some of the association that I want to have and I do not want to have that association. You can't go up to the PSC and start talking about marijuana and unusual things… you just see them

> cringe, too. I mean, they don't want to hear it and …all of a sudden, the wall gets built. You have to break down the barriers (p. 14, 15).

Glenn Carroll spoke about her experience with anti-nuclear activism as being isolating, which she perceived had sometimes posed a challenge to her activism. She also indicated that there was sometimes a "lack of support" or collaboration among her anti-nuclear colleagues, which sometimes was a barrier to her activism.

Organizational Capacity Activists also talked about organizational capacity issues that sometimes challenged their activism. This subtheme captured discussion about the structure of organizations and the lack of leadership or overdependence on established leaders as challenges to anti-nuclear activism. Activists mentioned that too much dependence on leaders within an organization had sometimes stifled their activism. Danny Feig-Sandoval discussed how much members can come to rely on one person within an organization, which he viewed as counterproductive. He said "I think that's what happens a lot in an organization, everybody depends too much on one person and that person can't do it all [then] you're not successful and it dilutes the effort of the organization" (p. 14). Finally, Glenn Carroll noted that a lack of leadership was an initial barrier to her activism in the anti-nuclear movement. Early on in her activism she recalled going to her meeting and found it hard to engage in the process. She said "none of them owned the group … nobody moved to make a sit for me, the new person…. [yet] they were a regular gang" (p. 11).

As anticipated, these findings indicated that major thematic categories describing facilitators and barriers to activists' development could be located across numerous levels and systems within Bronfenbrenner's (1979) ecological framework. The majority of activists

described facilitators and barriers beyond the individual level. Next, I expound upon how these facilitators and barriers can be located in relation to Bronfenbrenner's framework.

CHAPTER FOUR

4. Discussion

This research examined the development of long-term activists within the Georgia anti-nuclear movement. A qualitative case study design was used to allow for an in-depth exploration of 'first wave' elders' experiences and their perceptions of various barriers and facilitators to anti-nuclear activism. Of particular interest was how elders' perceptions of barriers and facilitators could be located in reference to the ecological framework.

Interview data described the rich experiences of grass-roots opposition to the nuclear industry and contributed to the extant literature about anti-toxic activism (Brown & Ferguson, 1995; Cable, 1992; Culley, 1998; Culley & Angelique, 2003, 2010, 2011; Krauss, 1993). Interviews with elder activists of the anti-nuclear movement in Georgia uncovered an array of factors that elders perceived to have influenced their development as activists.

These data will be discussed in terms of relevance to research previously mentioned in the literature review and additional research within the field of community psychology, strengths and limitations, and proposals for future research. First, I will discuss self-location, which fueled this research. Next I will use Bronfenbrenner's framework (1979) as a heuristic to locate facilitators and barriers of the elder anti-nuclear activists' development and I will integrate previous research with the current findings. Building on Bronfenbrenner framework, I will discuss these data in relation to relevant community psychology literature, namely Kelly's (1966) Principles of Ecology, succession. To put these data in perspective, I will discuss strengths and limitations of the current study and finally, I will propose directions for future research.

4.1. Self-Location

As a community psychologist and an agent of social change, I use an ecological perspective to understand human behavior and well-being. I believe it is necessary to understand numerous levels of influence on human behavior and to engage in political and social processes to bring about social change. Among the fundamental goals of community psychology, social change efforts should work to address the unequal distribution of resources and to promote social justice.

4.2. Bronfenbrenner's Ecological Framework

The use of Bronfenbrenner's framework as a heuristic to understand perceived facilitators and barriers to anti-nuclear activism highlighted that activists' development was influenced by numerous factors. To recap, Bronfenbrenner (1979) noted that individual development was influenced by individual level factors and by four nested systems beyond the individual: the microsystem (family, organizations), mesosystem (links between the microsystems), exosystem (media and political systems), and macrosystem (culture, values, ideology). These data may be explained in relation to factors within the individual, micro-, exo-, and macro-systems. I will first discuss the possible location of perceived facilitators and barriers related to these levels or systems within Bronfenbrenner's framework. I will primarily discuss the location of major thematic categories; however, in some cases I will locate and describe subthemes as they relate to Bronfenbrenner's framework to capture the entirety of a major thematic category. For example, subthemes within a major thematic category (e.g. *Sociopolitical Climate*) may be located within separate systems.

4.2.1. Individual Level

Within Bronfenbrenner's Ecological Framework the individual is at the center influencing development. Individual characteristics, such as temperament, cognitions, and ability provide the foundation in which individuals interact with their surroundings. At the individual level, activists noted that their *Personal Learning* of nuclear related issues, *Individual Attributes*, and *Self-interest* helped to facilitate their activism. Activists also noted barriers at the individual level. Activists perceived *Time Constraints*, *The Nature of the Subject Matter*, and *Individual Attributes* as challenges to their activism. Extant literature that follows has supported the current findings that individual characteristics are important in the development of activism.

All activists spoke about their *Personal Learning* about nuclear issues as a facilitator to their activism. This included realizing the complexity of the nuclear issue and the interconnectivity with other issues. This finding spoke to activists' development of critical consciousness, which has been found to be a major contributor to engaging in activism. The development of critical consciousness has been proposed as the cornerstone to sociopolitical development - a psychological process that leads to activism (Watts, et al., 1999). Furthermore, Culley and Angelique (2003) found that increased knowledge about nuclear issues maintained women's long-term activism about Three Mile Island. Adding to Culley and Angelique's work, the current study suggested that both male and female anti-nuclear activists described their development of knowledge, which incited their activism.

Conversely, in terms of developing knowledge about the issue, activists discussed *Time Constraints* as a challenge. Activists noted that the time it took to learn and disseminate technical and depressing information about the industry presented a challenge to their activism. Anti-nuclear activists said that their inability to gather the necessary information to lay blame on the

nuclear industry presented a challenge to their activism. Activists noted that the nuclear industry just like other toxic industries relied on the fact that it is near impossible to deem one entity responsible for pollution due to the disproportionate burden of toxic facilities in a single area. This barrier spoke to what Javeline proposed in relation to the blame attribution theory (2003), that activism is less likely to occur if it is difficult to lay blame on one specific entity. However, it is important to note that these activists overcame this barrier due to the fact that activists remained active and thus this finding only partially supported this theory. Future research may work to uncover the process whereby activists identify such barriers yet maintain their engagement. What factors acted as a buffer to the barriers identified by these anti-nuclear activists?

All activists highlighted *Individual Attributes* that acted as facilitators and barriers to their activism. Participants said that they possessed certain personality characteristics that facilitated their activism. Not surprising, due to their maintained activism, the majority of these activists mentioned their optimism toward their work to abolish nuclear power. Activists also stated that their faith in people and the universe to bring about positive social change motivated their activism. This faith described by activists may be related to activists' discussion about their spirituality as a motivator to their activism, a factor that has been previously cited as an important component of activism (Watts, et al., 1999). However, interestingly, elder anti-nuclear activists spoke primarily to their Earth-bound spirituality (faith and connection to Mother Earth and people) and less about an otherworldly entity, as proposed by Watts et al. (1999). Additional research into the distinction between Earth-bound versus otherworld spirituality may clarify our understanding about the connection between spirituality and activism. Further, additional research may ask the question, was it is enough for activists to have an Earth-bound spiritual

connection or was it the interaction between organizational capacity and such individual attributes that helped to facilitate their activism? Assessing the processes and/or interactions between variables would increase our understanding about the complex nature of activism.

The majority of activists noted that their socioeconomic status influenced their activism. Some activists mentioned that their financial security allowed them to engage in activism, which supported previous research (Erikson, et al, 1991; Pierce, et al., 1992; Verba & Nie, 1972; Verba, Scholzman, & Brady, 1995). However, despite remaining engaged in the anti-nuclear movement, a few activists said that their need to earn a living sometimes distracted them from their activism. Additional research about factors that buffer such perceived barriers would allow organizers to prevent the disengagement due to activists' perceived barriers. Specifically, research could increase our understanding about what factors related to engaging in activism may act as protective factors to override the influence of perceived barriers.

Some activists also noted that their prior activism experiences facilitated their involvement in the anti-nuclear movement. Activists' previous experience may have led to an increased self-efficacy, which many activists perceived as a facilitator to their activism. Watts' sociopolitical framework underscored the importance of increased efficacy in the development of activism (Watts et al., 1999) and this research supported this assertion. Future research may explore the relationship between these facilitators. Such that activists' prior activism experiences alongside individual level factors may have acted via a causal chain, which ultimately led to activism. Specifically, possessing a high income may have increased the likelihood that participants gained prior activist experience, which led to activists' increased confidence in their ability to act. Additional research to assess potential mediators based on these findings would elucidate potentially complex relationships undergirding activism.

The majority of activists talked about self-interest such as personal validation and harm as a facilitator to their activism. These findings supported Alinsky's writings that self-interest ultimately drove activism (1974). Similarly, women who were long-term Three Mile Island (TMI) activists spoke about self-interest as a motivator to their activism (Culley & Angelique, 2003). Other parallels can be drawn here as well. TMI activists noted that motherhood was a catalyst to their activism. Likewise, an activist noted being a parent who was concerned about her children's future, which in turn motivated her activism. Finally, other activists discussed their initiation into the anti-nuclear movement by living near nuclear facilities or transportation routes, which represented their self-interest to become an activist. Activists also noted that they felt personal validation as a facilitator to their activism. This finding supported the resource mobilization theory, which posited that activism is a product of legitimacy (Gamson, 1975; Tilly, 1978; McCarthy & Zald, 1973; 1977). Activists experienced numerous situations which allowed them to feel validated for their work, which motivated their activism.

Finally, several 'first wave' elders of the Georgia anti-nuclear movement perceived that their identification as artists had helped to facilitate their activism. Erikson (1968) proposed that experiences in adolescence affected identity formation and throughout adulthood individuals would identify opportunities to solidify this identity. It is likely that these activists identified opportunities with the anti-nuclear movement that allowed them to solidify their identity as artists. These elder activists talked about how their creative self helped them to communicate and solve problems related to anti-nuclear issues. Zinn has long discussed art as a means to effectively communicate political and social ideology (2006). It appears that the anti-nuclear movement via numerous non-profit organizations provided an outlet for activists' identity as artists.

4.2.2. Microsystem

The microsystem speaks to factors that have direct contact with the individual, which shape development. Activists' identified *Non-profit Organizations* related to the movement, *Family Climate*, and *Non-familial People* which were perceived to have facilitated their activism. Activists also perceived factors related to *Non-profit Organizations* and *Family* that were barriers to their activism. Factors related to these entities spoke to the influence of the microsystem.

All activists described participating in non-profit organizational activities, which facilitated their activism. Organizational activities provided a forum for activists to exchange resources and learn about nuclear issues from other activists. Activists noted that such participation allowed them to feel a sense of belonging and provided them a safe space to share their experiences with other activists. Participants' discussion about these factors spoke to the psychological concept of a Sense of Community (McMillan & Chavis, 1986; McMillan, 1996).

Activists also discussed taking on roles within organizations, which kept them plugged into the movement. This finding spoke to the importance of structural capacity, which has long been associated with activism and documented in various studies in extant literature. For example, Verba, Scholzman, and Brady (1995) discussed the influence of structural capacity among faith based groups, which allowed individuals to engage and build their skills to maintain activism. Similarly, the majority of activists mentioned that the multiple roles within organizations, allowed them to hone their skills and some became leaders working to attract new activists into the movement. This finding about becoming leaders of the movement exemplified the final stage of Keiffer's participatory competence, the era of commitment (1984). Walsh (1988) also found structural capacity increased activists' ability to engage in activism. In addition, Cable (1992) and McAdam (1986) stated that the presence of structure and social

networks facilitated activism, which the resource mobilization theory endorsed to achieve activism (Gamson, 1975; Tilly, 1978; McCarthy & Zald, 1973; 1977). In support of this literature regarding the importance of roles within organizations one activist noted that lack of leadership was a challenge to her activism.

The majority of activists spoke about how their family climate facilitated their development as anti-nuclear activists. Specifically, activists noted that supportive family relationships in their adult life and childhood had a positive impact on their activism. Specific to their adulthood, activists described support from their spouse and their wider family, which made it easy for them get involved and stay engaged. This finding supported previous research that indicated spousal and familial support was vital for TMI activists to stay engaged long-term (Culley, 1998). However, activists also noted that having a family also distracted them from their activism. Specifically, activists described conflicts between their role as an activist and that of a mother and/or wife. Culley (1998) described the difficulty that women experienced with role conflict. This finding supported this previous research and added to this body of literature in that both men and women elder anti-nuclear activists spoke about this role conflict. Additional research would clarify if family role conflict differentially affects male versus female activism.

Related to family climate, a smaller group of activists noted that their upbringing facilitated their activism. These activists described themselves mirroring their parents' values, work ethic, and careers, which influenced them to work hard, value others, and develop interests in the sciences. This finding spoke to previous research about the power of modeling. Specifically, Steward and Healy (1989) found that parental war-related activism was associated with student's support of war-related activism.

Finally, activists talked about fellow activists, mentors, professionals, friends and colleagues who motivated their activism. Fellow activists and mentors modeled activism. This finding provided additional support to the work of Steward and Healy (1989) who found that parental modeling of war-related activism increased students' consciousness about injustices of war, which led to their support for such activism. Similarly, other activists, mentors, and professionals increased activists' awareness and critical consciousness about nuclear related issues, which incited their activism. Watts et al. (1999) proposed that gaining critical consciousness is the cornerstone of sociopolitical development and the ensuing activism. Further, most activists noted that they perceived support from medical doctors, lawyers, psychologists, and economists. This support from other people spoke to the resource mobilization theory, which posited that activism was a product of support (Gamson, 1975; Tilly, 1978; McCarthy & Zald, 1973; 1977). The mesosystem involves the relationships between entities within the microsystem (e.g. relationships between people and organizations, families and organizations, and/or collaborations between organizations). These relationships may enhance or diminish development. These data represented a first step in understanding factors that influence activism and thus cannot speak to the interaction effects between entities within the microsystem. Future research should use these findings to assess potential interactions between factors within the microsystem, as outlined in Bronfenbrenner's ecological framework.

4.2.3. Exosystem

The exosystem includes systems such as the media and government. An individual may have no direct contact with these systems yet they have the potential to exert considerable influence on an individuals' development due to the power they possess within society. All anti-nuclear activists discussed the media and two subthemes of *Sociopolitical Climate (SPC),*

Nuclear Related Events and *Receptive Policy- and Grant-makers* that facilitated their activism. Furthermore, the majority of activists also noted that *Mainstream Media* and two subthemes of *SPC*, the *Nature of Legislative Bodies* and a *Pro-nuclear Climate* in the US were barriers to their activism. In keeping with Bronfenbrenner's Ecological Framework it is important to note that it is presumed that activists were indirectly influenced by these factors within the exosystem.

Most of the activists discussed media sources in the form of magazines, newspapers, books, films, and websites that incited their activism. The majority of these activists mentioned media that were published by alternative media outlets. Activists also mentioned the media as a barrier to their activism. Specifically, the lack of information and misinformation published in mainstream media presented a challenge to anti-nuclear activists. This finding spoke to the importance of alternative media to the anti-nuclear movement. Specifically, alternative media represented an alternative setting for anti-nuclear activists to learn about and disseminate information related to the nuclear industry. As proposed by Kloos, Hill, Thomas, Wandersman, Elias, and Dalton (2011), alternative settings "provide conditions and resources that support the functioning of people [and organizations] for whom the current options do not work" (p. 163). With regard to anti-nuclear activists, alternative media provided an outlet to address social and environmental justice concerns identified by the anti-nuclear movement that otherwise would be ignored by the mainstream media. Additional research about the influence of mainstream media could counter this perceived barrier identified by anti-nuclear activists.

Activists also talked about the usefulness of the internet to activists' work. The utility of the internet as a tool to engage people in activism has received much attention over the past 25 years (Bimber, 2001; Cleaver, 1997; Diani, 2001; Myers, 1994). Specifically, Cleaver (1997) noted that the internet has united activists across movements, increasing collective power to

address a variety of social justice issues. Some activists said that the internet helped facilitated their activism. However, it is important to note that others mentioned that the internet was a drain on their time, which sometimes interfered with their personal lives. This finding may be related to the age of activists and thus may be discussed in terms of the chronosystem, a system which speaks to a societal era that may differentially influence development across time. Specifically, anti-nuclear activists interviewed for the current study did not grow up with personal computers or the internet, which required them to learn how to use this technology as opposed younger activists who grew up using this technology. Thus, the experience of elder activism and perceived barriers involving the internet may be unique to this population.

Most of the activists discussed Nuclear Related Events (coded as a subtheme within Sociopolitical Climate) which spurred their activism. This subtheme included activists' recollection of accidents such as Three Mile Island, Chernobyl, and most recently Fukashima and proposals for new reactors, which incited and/or sustained their activism. Furthermore, activists talked about a pro-nuclear political agenda, namely the nuclear resurgence, which incited their activism. These findings supported the blame attribution theory, as proposed by Javeline (2003). Specifically, activists were able to identify the source of grievance and lay blame on specific entities within the nuclear industry and the industry's regulatory body, the Nuclear Regulatory Commission for the numerous nuclear events mentioned by activists within this subtheme.

The majority of the activists also talked about Receptive Policy- and Grant-makers – a subtheme of Sociopolitical Climate, which helped to facilitate their activism. This support allowed the participants to feel that they had power to engage in the political process within the US. Activists felt that they had power via people engaged in the movement but support from

policy- and grant-makers gave them additional power, which motivated them to maintain their activism. This support addressed the third dimension of power, agenda setting and shaping conceptions (Lukes, 1974). Specifically, these policy- and grant-makers worked to set a political agenda concerned about the safety and financial issues inherent with the nuclear industry, which supported the work of anti-nuclear activists. Additional research about supportive relationships with policy- and grant-makers could uncover how such relationships may act as protective factors to the barriers perceived by activists.

Activists mentioned barriers related to the US political system. Specifically, activists discussed the Nature of Legislative Bodies and a Pro-nuclear Climate (coded as barriers within the major thematic category of Sociopolitical Climate). Female activists described encounters with Georgia legislators who belittled professionals testifying against the transportation of radioactive waste due to public health concerns and indicated that they lacked even basic information about the topic under discussion. Culley and Angelique (2003) documented similar sexism when federal nuclear regulatory bodies routinely discredited activists due to their gender. These women felt that the male-dominated NRC did not take them seriously, regardless of expertise. Similar to Culley and Angelique's work, these instances portrayed a lack of respect for public participation in decision-making processes.

In addition, activists perceived that the Pro-nuclear Climate was a barrier to their activism. For example, activists' perceived that the Georgia Public Service Commission (PSC) had been bought out by the nuclear industry and public utilities, which prevented the PSC from making unbiased decisions about nuclear energy. Activists routinely described predetermined political decision-making that favored the industry. Specifically, activists talked about corporate financing of politicians, which activists perceived as perpetuating social and environmental injustices

related to the nuclear industry. The financing of political campaigns in the US have long received attention in hopes to equalize power in political elections (Fair Elections, n.d.). Specifically, North Carolina, Arizona, Connecticut, and Maine have taken action to prevent special interests deciding political elections by adopting citizen-funded elections (Policy Snapshot, n.d). This type of work speaks to the goals of community psychology to change the system to promote individual and community well-being. Future research may assess the role of community psychologists in relation to campaign finance reform.

4.2.4. Macrosystem

The macrosystem involves ideology or values or the culture of a society. For example the individual may be influenced by ideologies such as collectivist versus individualistic values within a society. The majority of activists described larger cultural and societal values that influenced their activism. Activists discussed *Social Movements* (a subtheme of *Sociopolitical Climate (SPC))*, which helped facilitate their activism. Furthermore, activists talked about *Resource and Power Imbalances* as a barrier to their activism. As discussed earlier in relation to the exosystem, it is presumed that activists were indirectly influenced by these factors within the macrosystem. This is in keeping with Bronfenbrenner's Ecological Framework, which highlights the importance of numerous factors, both direct and indirect.

Activists described the cultural context of social justice movements that motivated their anti-nuclear activism. Specifically, participants cited injustices related to African American and indigenous populations throughout the Americas. This finding represented their awareness of inequitable social conditions, which Watts, et al. (1999) proposed as an important factor within their framework of sociopolitical development. In addition, these data partially supported Keiffer's first stage of participatory competence, that activists became engaged due to their

realization of the social injustices. However, it is important to note that many of activists did not enter the movement as politically illiterate, as Keiffer proposed. Instead many activists had prior activism experience and noted their long held political awareness regarding social injustices.

The majority of activists noted that resource and power imbalances in favor of the nuclear industry were challenges to their activism. Participants perceived that these power imbalances were a product of political support for the nuclear industry and represented a culture that valued patriarchy and war. Culley (1998) also found that long-term anti-nuclear activists discussed the privilege of the nuclear industry. These activists noted that resource and power imbalances allowed the industry to shape beliefs about the need for the nuclear industry. Similarly, Culley and Angelique (2010) found that long-term TMI activists perceived that the government and industry had the ability to shape public opinion. Furthermore, this imbalance explained how the interests of poor communities (e.g. Waynesboro, Georgia the community around Plant Vogtle) were shaped by the nuclear industry, which represented the third dimension of power (Lukes, 1974).

4.2.5. Summary

All anti-nuclear activists identified facilitators that can be located at the individual level in relation to Bronfenbrenner's framework. Identification of facilitators at the individual level suggested that participants felt confident in their ability as activists, which is one explanation of why these activists were engaged. Furthermore, activists' identification of facilitators within the micro-, exo-, and macro-systems suggested that they perceived the necessary social support that allowed them to stay engaged in their anti-nuclear activism despite the barriers they identified.

The majority of barriers to anti-nuclear activists' work can be located within the exo- and macrosystems in relation to Bronfenbrenner's framework. This spoke to the need for activists

and interventionists to address the influence of media, government, and larger cultural values that made it difficult for activists to rectify the perceived social injustices related to the nuclear industry. As mentioned earlier, a goal of community psychology is to promote social justice and these data presented an avenue for community psychologists to intervene and realize this goal. These data represent the first step in identifying the problem, a fundamental step to proposing solutions within a community. Future research about interventions to address larger systemic factors such as the media and political systems in the US will be discussed later.

4.3. Contributions to Community Psychology Research and Practice

Bronfenbrenner's ecological framework allowed me to locate perceived facilitators and challenges to anti-nuclear activism. To build on this framework, I will discuss succession, a principle of ecology proposed by Kelly (1966) to understand anti-nuclear activism. Further, I will expound on some factors characterized as barriers that may be interpreted as challenges to campaign success as opposed to barriers to individual activism. This discussion falls under the purview of second order change, which is pertinent to the field of community psychology (Siedman & Rappaport, 1986). I will highlight practical implications of these data by asking, how may these data be used by practitioners seeking to build the anti-nuclear movement and other social movements?

In 1966, James Kelly discussed four principles of ecology to understand the connectivity between individuals and settings. Kelly sought to understand the functionality of communities relating to interdependence, cycling of resources, adaptation, and succession. I propose that these data speak to the principle of succession. In terms of practical implications, the anti-nuclear movement should be focused on addressing succession to ensure that the movement is maintained and developed overtime. These data provide useful information to organizers, leaders,

and activists to this end. I will discuss practical implications based on the retention and development of existing activists and the recruitment of new activists. In keeping with this theme of developing the anti-nuclear movement I propose that these data indicate ways in which the movement may build coalitions across social movements to enhance their impact on society.

Retention of existing members is an important factor to ensure the development of new activists and social movements. Longevity of member participation generates historical knowledge that allows elders to recognize the context of their work and allows newcomers to plug-in to maintain or develop elder activists social change efforts. Kelly spoke to the issue of retention via the principle of succession, continuity despite change over time. These data have uncovered important factors to ensure continued activism. This study represents the first step in assessing the development of the anti-nuclear movement by documenting the history of the anti-nuclear movement in Georgia. Activists identified that organizational activities, capacity, and power aided in their continued activism. Specifically, they said that organizations that facilitated meetings with the public, policymakers, and potential new activists were instrumental to their engagement in the movement. Organizations gave activists a platform to disseminate information giving them roles to develop relationships, and nurture networks with other anti-nuclear activists. Further activists mentioned that the internet was a useful tool to stay engaged as an activist. The availability of the internet to engage in the movement was particularly important for Adele Kushner due to her isolated geographic location. This finding highlights how a facilitator buffered the influence of a perceived barrier. I will discuss the need for additional research to assess how factors moderated the influence of barriers.

Recruitment of new activists allows movements to maintain their relevance within society. Changing populations, politics, and perspectives must be reflected within any movement

to galvanize critical mass and ensure their success. Zinn (2010) proposed that movements are reflections of cultural ideology and societal will for social change. Practitioners working with organizations and more broadly social movements can use these data to aid in the recruitment of new activists. Activists mentioned that learning new information by attending local events aided in their realization of the issues related to the nuclear industry. Organizations have a responsibility to disseminate information to the public and provide roles for new activists to plug-in and become disseminators of this information. Further as activists noted that it is important for leaders and activists to define and celebrate small wins (Weick, 1991) and recognize that the collective action of small groups of fellow activists have the ability to make social change, as originally proposed by Margaret Mead (1964).

Some activists mentioned the importance of art within the anti-nuclear movement. This finding has been proposed by other social scientists assessing the factors that influence social movements. Howard Zinn (2010) said that social movements are reflections of the sociopolitical climate and art is a way to communicate change in a non-threatening way. Further, Radley and Hill (2007) proposed that art is effective in changing the dialogue of a specific issue, but also that art may be viewed as a tool to realize liberation from an oppressive situation. These data highlight the importance of art to anti-nuclear activism, which opens up an avenue to build coalitions with other social movements who value art as an effective tool to promote social justice. For example, Radley and Bell assessed artwork as a tool for women living with breast cancer to achieve social justice. Art allowed survivors of breast cancer to reframe the popular image of cancer and sociologists (Brown et al., 2004) have documented the development of an environmental breast cancer movement to focus on the environment being risk sites instead of women's bodies. Anti-nuclear activists' discussion about the importance of art and their focus on

toxic environment s associated with the nuclear industry (among other things) reflects the work of some activists in the breast cancer movement. This connection could lead to the development of a coalition between social movements that broadly oppose toxic environments and recognize art as a way to make social change.

4.4. Summary Paragraph

The research findings validated previous research about individual level facilitators and barriers to activism. However, the use of Bronfenbrenner's model highlighted how larger societal structures beyond the individual influence activism. Further, interpretation of findings in relation research published within community psychology (Culley, 1998; Culley & Angelique, 2003; 2010; 2011; Keiffer, 1986; Kelly, 1966; McMillan & Chavis, 1986; Watts, et al., 1999) suggested that community psychologists contribute to increasing our understanding about how social movements work to bring about social and environmental justice. Social movements have the potential to increase individual and community well-being, a goal of community psychology (Sloan, Angelique, & Culley, 2011).

4.5. Strengths and Limitations

Strengths and limitations of the study are described to put the implications of the study into perspective. The strengths of this study include focus on the elder's perspective and my previous relationship with participants. The limitations of this study include the potential for responder bias, the small ethnically homogenous sample size, and restricted location of activists.

A strength of this study is the sample. The use of activists with such an extensive history of this topic allows for a wealth of experience to come forth. This historical voice is often missing; creating a gap in knowledge, which inhibits complete understanding of the issue at hand.

The long-term experience of anti-nuclear activism is important to understand the development and maintenance of activism surrounding this issue.

This study was made possible due to the relationships I developed with many activists involved in grass-roots opposition to the nuclear industry over the past five years, locally and nationally. Nine out of ten activists that I interviewed knew me as a fellow activist and community psychologist concerned about the perceived social and environmental justices of the nuclear industry. These relationships are perceived as a strength to the study because previous research (Culley, 1998) noted the difficulty in recruiting activists to participate in academic research due to mistrust of academics. However, this strength may have influenced the type of information discussed by activists, namely responder bias. This and additional limitations are discussed below.

My conversations and involvement with activists prior to these interviews may have influenced the activists' descriptions of their development. Activists' dialogue about their development in the movement may have been primed by our previous conversations. Specifically, activists may have responded to prompts in the interview in a way that sought to reinforce ideas previously discussed in prior conversations about influential processes and factors to activism in general, potentially resulting in responder bias. Despite a concerted effort to control responder bias by implementing the semi-structured interview and encouraging activists to control the direction of their interview, some bias may have been introduced.

The study included interviews with 10 elder activists of the anti-nuclear movement in Georgia, all of European descent. Thus, these data describe an ethnically homogeneous, small segment of the broader anti-nuclear movement in the U.S. However, the sample is representative of elders within the anti-nuclear movement in Georgia. Additional research interviewing a larger

sample of ethnically and geographically diverse anti-nuclear activists may allow a more comprehensive understanding of anti-nuclear activists' experiences and development.

4.6 Future Directions

These findings point to several directions for future research and practice. Additional research with the current sample to understand the complex relationships between facilitators and barriers would expound upon the current findings. Further, research with anti-nuclear activists no longer engaged and activists from other geographic regions would increase our understanding of the broader anti-nuclear movement. Finally, research and practice relating to potential interventions to address the concerns voiced by participants would further the anti-nuclear movement. Future research with this current sample will increase our understanding about the complex relationships between perceived facilitators, barriers, and activism. Despite encountering perceived barriers participants remained engaged in the anti-nuclear movement. Additional research would increase our understanding about the process of engagement and under what circumstances individuals engage or disengage in activism.

Understanding how the current activists overcame perceived barriers may shed light on the process of maintaining engaged activists in the movement. For example, the current sample mentioned a few factors relating to the index of a sense of community (SOC) (Chavis & McMillan, 1986), which facilitated their activism. A SOC may mediate the relationship between perceived barriers and activism. It is possible that activists' who perceived resource and power imbalances as a barrier may have engaged in organizations, which gave them a forum in which to share their frustration with other activists, gain a sense of shared connection, and ultimately sustain their activism.

Further, it appeared that some factors may have acted as a buffer to the negative influence of these barriers. Thus, additional research should assess whether or not factors moderated the relationship between perceived barriers and activism. For example, participants discussed that they felt a sense of belonging (a factor of SOC) (Chavis & McMillian, 1986). SOC is well documented as a protective factor in high risk communities. This community attribute may have buffered the negative effect of perceived barriers (e.g. required time commitment) and positively influenced their engagement. Conversely, activists no longer engaged in anti-nuclear activism may not have experienced factors related to a SOC (or other protective factors), which made it easier for them to disengage from the movement when they experienced barriers to their activism.

To further understand the complex nature of activism, future researchers may want to quantify the level of activism among the participants. Specifically, additional research to assess activists' level of participation over their twenty year engagement in the movement would enhance understanding of anti-nuclear activism. Understanding participants interaction with other activists, the public, and/or the policymakers (via email, phone, and/or in-person correspondence), the frequency of participation (at hearings, board meetings, educational and fundraising events) and assuming leadership roles, may yield data that could distinguish notable factors between highly versus moderately involved activists and would speak to the consistency of activists' engagement. Related to this type of inquiry additional research should assess if specific facilitators and barriers were most prominent at a specific stage in participants' activism. For example, were some barriers and facilitators more influential at the beginning of an activists' tenure or once they had become more seasoned? This information would build on Keiffer's (1984) model of sociopolitical development and help practitioners anticipate relevant facilitators or challenges that primarily affect a newcomer or a more experienced activist.

Research with activists no longer engaged in the anti-nuclear movement would increase our understanding about how to prevent future activists' disengagement. Employing a similar research methodology to the current study with those who were formerly engaged in the anti-nuclear movement would increase our understanding about perceived facilitators and barriers to their development as activists and their subsequent disengagement from the movement. Activists in the current study named numerous formerly engaged activists and/or mentors, which generated a snowball sample for future research. Interview with activists who are no longer engaged in the anti-nuclear movement may look quite different from the current sample of engaged activists and would provide necessary insight into the movement in Georgia.

These data represented anti-nuclear activists within Georgia. While Georgia is an important area to investigate due to federal appropriations of money to build new reactors at Plant Vogtle, future research may similarly assess activists beyond Georgia. Assessment of activists across the United States will provide a rich documentation of activists' experiences that may be useful to understand the larger anti-nuclear movement. As previously mentioned, the Alliance for Nuclear Accountability (ANA) is an umbrella organization that serves to network anti-nuclear organizations throughout the United States. ANA would be an appropriate resource to locate anti-nuclear activists in geographic locations outside of Georgia. Further, future research should assess how participation in this coalition of anti-nuclear organizations and collaborations between organizations (facilitated by ANA) affects individual activism.

Finally, in line with the ideals of community psychology, intervention research that supports activism (e.g., the exploration of the most common perceived barriers to anti-nuclear activism) should be conducted to reduce the obstacles that this population identified. The majority of activists described the mainstream media and political systems in the US as barriers

to their activism. Thus, potential interventions may include media and campaign finance reform. Social movements seeking justice commonly cite the need for these types of reform (Fair Elections, n.d.), yet to my knowledge community psychology has yet to intervene in this capacity. This research represented the first step in understanding anti-nuclear activism in Georgia and provides the foundation in which to conduct many research interventions that promote individual and community well-being.

This study was the first step to document the history of the anti-nuclear movement in Georgia. This research was an important process to highlight resources that otherwise may have never been verbalized and documented. This information will be disseminated to academics, practitioners, existing and potential new activists to help strengthen existing organizations in their efforts to facilitate the empowerment of emerging “second wave” activists facing new nuclear proposals. I have been fortunate to build relationships in the community to lay the foundation for participatory action research so that all citizens are given the chance to be heard and participate in building economic security, health, and a safe environment.

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APPENDICES

Appendix A

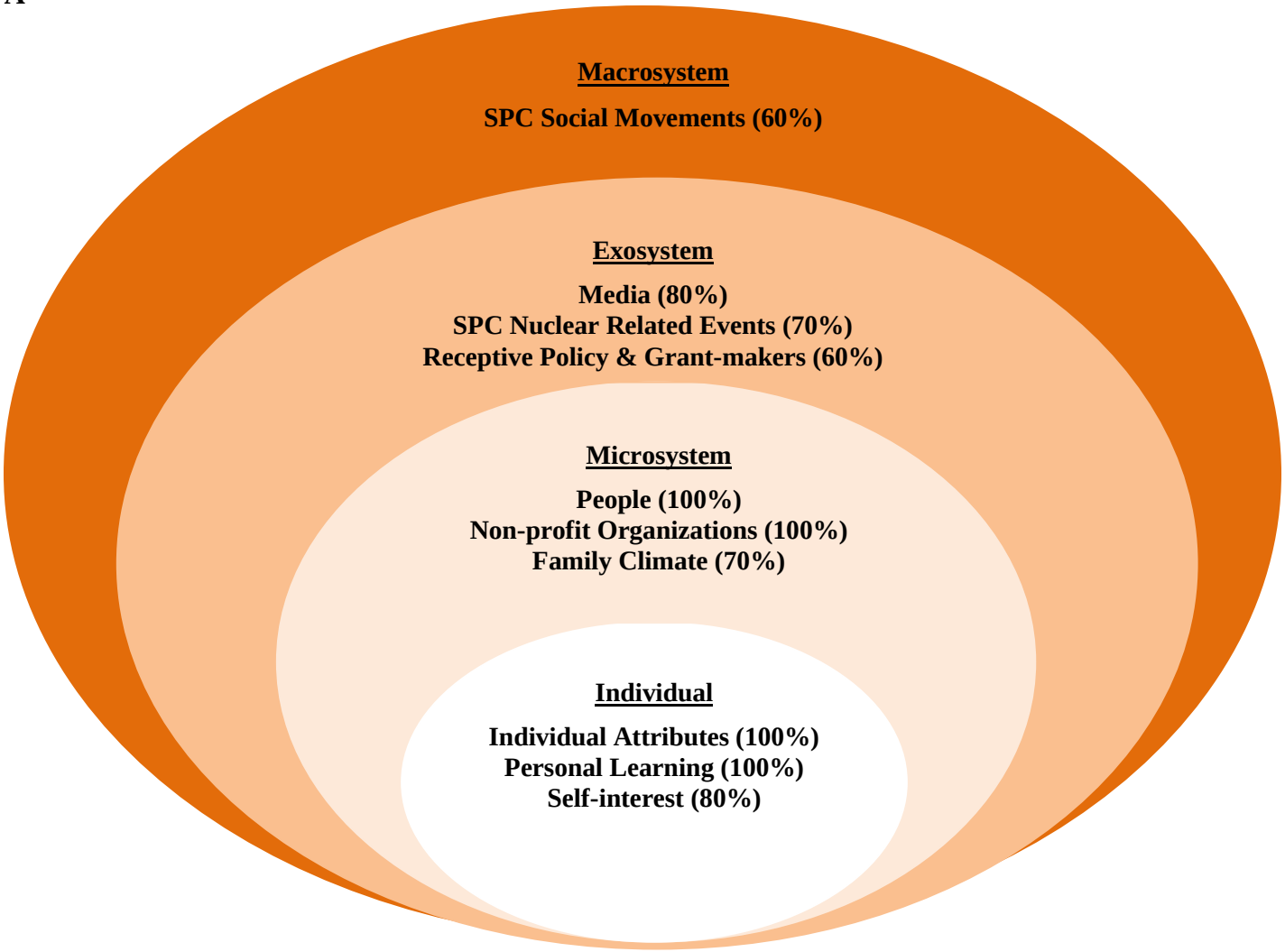

Figure 1 Perceived Facilitators to Anti-nuclear Activism

Appendix B

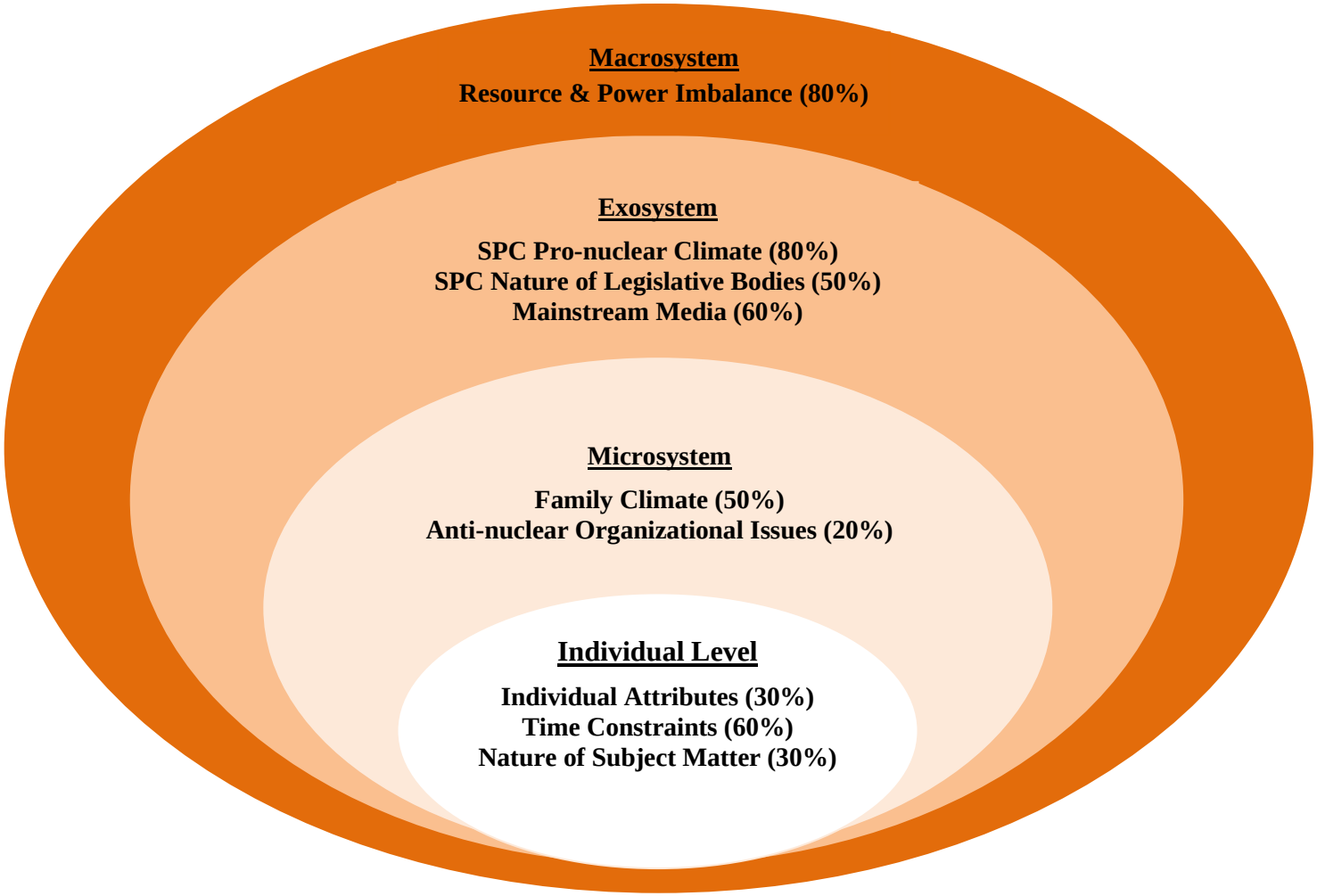

Figure 2 Perceived Barriers to Anti-nuclear Activism

Appendix C

RECRUITMENT EMAIL

Dear [insert anti-nuclear activists name],

My name is Emma Ogley-Oliver. I am a Georgia State University graduate student working with Dr. Marci Culley. As you may know, Dr. Culley and I are working on a project to document the oral history of long-term anti-nuclear activists. We are beginning with activists in Georgia.

We are interested in understanding more about your development as an anti-nuclear activist and would like to interview you about your experiences. We anticipate that the interview will take approximately an hour of your time.

Ideally, we would like to conduct an interview with you as soon as possible - within the next few weeks. If you agree to participate, I would like to schedule an interview with you at a time and place of your convenience. Please do not hesitate to contact Dr. Culley or me with any questions.

We look forward to talking with you!

Thank you so much your time,
Emma

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Appendix D

DEMOGRAPHICS QUESTIONS

1. What is your current age?
2. Please list your primary residences throughout your activism (just want to know about the areas you have lived)?
3. What was the approximate date of your first involvement as an anti-nuclear activist?
4. What is your ethnicity?
5. What is your educational background (level of education and discipline area)?
6. What is your family income?

Appendix E

INFORMED CONSENT

Georgia State University

Department of Psychology
Informed Consent Title: "First Wave" Elders of the Anti-Nuclear Movement in Georgia: A Qualitative Study –
Phase One
Principal Investigator: Marci R. Culley, Ph.D.

I. Purpose:

You are invited to participate in a research study. The purpose of this study is to conduct interviews to document the experiences of "first wave" elders of the anti-nuclear movement in Georgia. It is hoped that the information gathered will help to increase understanding of of "first wave" anti-nuclear activism in Georgia. You are invited to participate because you are an antinuclear activist who has been involved for 20 or more years. Your participation in the study will involve being interviewed, which is expected to take about one hour. We expect to interview about 20 "first wave" anti-nuclear activists in Georgia.

You may also be contacted at a later time to participate in phase two of the study. During this phase, the researchers will conduct a focus group with you and other participants. In this focus group, we will discuss interview findings and work together collaboratively to determine how these findings might be used to develop resources that will strengthen elders' efforts to educate and mobilize an emerging "second wave" of anti-nuclear activists who are facing new nuclear proposals in Georgia and elsewhere.

II . Procedures :

If you agree to participate in this study, we will interview you about your anti-nuclear activism. With your permission, the interview may also be audio- and video-taped. Audio tapes will be used to aid data collection and will be destroyed at the end of the study. Only the research team will have access to audio tapes. Video may be used later to develop resources for new activists and others. The interview will take place at a location of your choice at an agreed upon time. You will receive $20 for your participation in the interview.

III. Risks:

In this study, there are no anticipated physical or psychological risks to you. You will be debriefed after each interview and will be given the contact information for the Principal Investigator and Georgia State University's Office of Research Integrity to ensure that you have an opportunity to express any questions or concerns about the study.

IV. Benefits:

Participation in this study may or may not benefit you personally. The study may benefit you by allowing you to gain recognition for your work in the anti-nuclear movement and by having the opportunity to provide information about your experiences that may benefit future anti-nuclear activism and society as a whole.

V. Voluntary Participation and Withdrawal:

Your participation in research is voluntary. You have the right to decline participation in this study. If you decide to be in the study and change your mind later, you have the right to drop out at any time. You may stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:
We will keep your records private to the extent allowed by law. In the reporting of the interview information you will not be identified by name or in video unless you indicate that you wish your name be used and give permission to be videotaped by signing the appropriate lines at the bottom of this form. If you do not give permission to use your name, a pseudonym will be associated with your interview responses and the interview will not be videotaped. However, given the public nature of some anti-nuclear activities and that organizational roles or job titles may be associated with your responses, it is important to understand that although pseudonyms may be used, your identity may be evident to those who are familiar with such activities or the public documents /websites associated with them.
The Principal Investigator and her researcher team will have access to the information you provide during the interviews. Information may also be shared with those who make sure the study is done correctly, including the GSU Institutional Review Board and the Office for Human Research Protection (OHRP). The content of interviews will also be discussed with other research participants during phase two of the study. If you prefer that some information is not shared with the group, you may request that this portion of the interview be "off the record." Hard copies of data and audio and video tapes will be stored in a locked file cabinet and will be destroyed at the end of the study. Electronic data will be stored on a password- and firewall-protected computer. Any information that identifies you will be stored separately from the interview data to protect your privacy if you do not give permission to use your name.
VII. Contact Persons:
You can call Dr. Marci Culley at 404- 413-6266 or email her at mculley@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu
VIII. Copy of Consent Form to Subject:
We will give you a copy of this consent form to keep.

If you are willing to volunteer for this study, please sign below.

_____ _____
Participant Date

_____ _____
Principal Investigator or Researcher Obtaining Consent Date
If you give permission to use your name when reporting interview information, please sign below.

_____ _____
Participant Date
If you give permission to audio-record your interview, please sign below.

_____ _____
Participant Date
If you give permission to videotape your interview so that it may be used to develop resources for new activists and others, please sign below.

_____ _____
Participant Date
Consent Form Approved by Georgia State University IRB June 22, 2010 - June 21, 2011.