Trial by Flood: Experiences of Older Adults in Disaster

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TRIAL BY FLOOD:
EXPERIENCES OF OLDER ADULTS IN DISASTER

by

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A thesis submitted to the
Faculty of the Graduate School of the
University of Colorado in partial fulfillment
of the requirement for the degree of
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This thesis entitled:
Trial by Flood:
Experiences of Older Adults in Disaster
written by Nnenia M. Campbell
has been approved for the Department of Sociology

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Date: June 7, 2016

The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above mentioned discipline.

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ABSTRACT

Campbell, Nnenia
Trial by Flood: Experiences of Older Adults in Disaster
Thesis Directed by Professor Kathleen Tierney

Over the past two decades, scholars have significantly advanced our understanding of factors that increase disaster vulnerability among older adults. These insights have been critical due to seniors’ disproportionate risk of experiencing disaster-related mortality, serious injury, and loss. However, scholars have not paid sufficient attention to these individuals’ subjective experiences of disaster or the role that these experiences play in responding to such events. Furthermore, as is the case with the disaster literature more broadly, little is known about how elders recover from extreme events over the long term. This research helps to fill these gaps in the literature by exploring disaster response and recovery among older adults who were affected by the 2013 floods in Boulder County, Colorado.

I draw upon social vulnerability and social capital frameworks to explore factors that influence older adults’ experiences of disaster and their capacity for resilience. I present data collected through 42 in-depth interviews with flood-affected seniors, 30 structured interviews with key community stakeholders, and content analysis of more than 100 items. In exploring the service provider landscape, I find that networks of senior-serving organizations and the social capital accessible through them can play an integral role in circumventing barriers to elders’ recovery. However, I also discuss how these resources are contingent upon the community setting. My analyses of seniors’ narratives highlight the ways in which they utilize social ties to cope with challenges and adapt to changing conditions in the post-disaster environment. Additionally, I explain how the recovery process unfolds within, and is thus shaped by, the local political economy. Finally, I discuss factors that influence seniors’ capacity for individual resilience and contributions to community resilience. This research complicates the discourse about disaster vulnerability and calls attention to the importance of engaging seniors as conscious stakeholders in disaster settings rather than dismissing them as passive victims.
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My research would not have been possible without the many individuals throughout Boulder County who took the time to share their insights, vouch for me, and support my work. I am truly grateful to each of the community members who helped point me in the right direction along the way and challenged me to think about my work differently.

Much appreciation goes to my parents, who were always willing to fight to ensure that I had the tools to pursue my educational aspirations. They have been instrumental in supporting my intellectual curiosity and ability to walk my own path. I am truly grateful for their unwavering encouragement. I must also acknowledge Celestino Marques, my cherished backup parent for more than a decade. Many thanks also go to the entire Satushek clan for embracing me and letting me lure Adam to Colorado with an undetermined return date.

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I would also like to extend my heartfelt thanks to the members of my dissertation committee: Kathleen Tierney, Liesel Ritchie, Liam Downey, Lori Hunter, and Don Grant.
Kathleen, you inspired me 10 years ago to set my sights on CU and the Natural Hazards Center. You’ve pushed me to think broadly and critically, and I appreciate all of the doors you’ve opened for me to step through at my own choosing. Liesel, I don’t have words to describe my gratitude for the fact that you have always had my back and been there to support me. You are a cherished mentor and friend. Liam, you’ve been a thorn in my side, constantly pushing me to think more theoretically—and I truly appreciate it. Lori, thank you for always being so encouraging and asking questions that force me to broaden my thinking about my work. Don, I appreciate your even-handedness and thoughtful feedback.

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CHAPTER I
INTRODUCTION

Introduction

In September 2013 Northern Colorado experienced a prolonged precipitation event, with a stalled storm system dousing the area with a year’s worth of rainfall over the course of eight days. On the evening of September 11, with the ground reaching saturation and drainage areas filling to maximum inundation, flash flooding began to occur across the Front Range region. In the mountains, floodwaters screamed through creeks and rivers, dragging boulders, trees, and large objects such as propane tanks and even vehicles, in a dangerous parade of crashing debris. A number of communities were entirely cut off from external access, with some residents hunkering down and others forced to flee their homes, waiting anxiously for the water to subside.

The floods ultimately caused an estimated $3.36 billion in damage across the state, displaced 18,000 residents, and permanently altered the composition of some communities (Colorado Department of Local Affairs 2014; FEMA 2013). More than 2,500 people were evacuated via helicopter from mountain towns in what military personnel have described as the largest airborne evacuation mission in the United States since Hurricane Katrina (Colorado Guard National Affairs 2013). At lower elevations in Boulder County alone, more than 800 individuals were rescued via ground evacuations and 9-1-1 operators answered 8,000 calls—some these callers could not be reached due to an inability to physically access those in need (Boulder County 2015).

Age-related vulnerability was a particular concern, with people aged 60 and older accounting for half of the 10 fatalities resulting from this disaster—despite the fact that
individuals in this age group comprised only about 12% of the population within the affected counties. Beyond this disproportionate representation among the dead, many older survivors faced crippling ongoing flood impacts. Numerous mobile home parks, which were largely populated by seniors as they provided the most affordable housing options for individuals on fixed incomes, were either severely damaged or entirely destroyed. Displaced seniors often struggled to maintain their local social support networks, as rising property values and rental rates priced them out of their communities and left them socially isolated in the flood’s aftermath. Relocation to affordable but remote areas translated into extensive travel time to reach markets and services, creating an additional burden for seniors with limited transportation options. Route closures were a particular challenge for seniors residing in mountain areas, where six of the seven routes connecting through to the plains had been cut off (ISET 2014).

Despite the challenges some older residents faced, many demonstrated substantial resilience to flood impacts and provided invaluable services to disaster-stricken communities. To provide a handful of examples about how seniors throughout the county drew upon their existing skill sets to support disaster response and recovery efforts: Community members’ accounts are replete with examples of hearty elders, both local residents and outside volunteers, driving heavy equipment along creeks and rivers to clear blockages and remove debris. A network of amateur or “ham” radio operators throughout the mountain areas, comprised in large part of older residents, served as the backbone of the communications network for many communities when other technologies failed (ISET 2014). Locals registered with Retired Senior Volunteer

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1 Throughout this dissertation I use the words “senior,” “older adult,” “elder,” and “aged” interchangeably to refer to persons aged 60 years and above. While demographic estimates often use age 65 as the criterion for identification within this population, many local organizations, including those in Colorado, begin offering social services designated for older adults at age 60.
Programs oversaw case management, coordinated cleanup efforts, and assisted with mental health outreach for flood-affected residents.

These examples serve as a reminder that although older adults are often disproportionately vulnerable to disaster, they are not passive recipients of disaster impacts and in fact often demonstrate considerable resilience that may translate into broader community benefits. Myriad factors contribute to disaster outcomes across the life course. However, the literature has primarily focused on how age-related challenges hinder successful disaster response, with far less attention paid to variation in outcomes or experiences. Further, few studies have followed events over time to examine long term recovery among those advanced in age. This dissertation seeks to examine the disaster recovery process among older adults by applying a social capital framework to understand the impacts and aftermath of the 2013 Colorado floods.

**Trends in Aging: Implications for Disaster Research**

Population projections indicate that the aged will be increasingly exposed to environmental upheavals in the coming decades. The proportion of seniors is growing rapidly worldwide, while at the same time human settlements continue to expand into environmentally sensitive locations. Currently in the United States one in every eight people, or just under 14% of the population, is aged 65 years or older. As the Baby Boom and subsequent generations advance in age, this figure is projected to more than double to over 90 million by the year 2060 (Administration on Aging 2013). Life expectancy is on the rise both within and outside the U.S., with the growth rate of the 65 and older population in less developed countries increasing sharply in recent years. Further, the oldest old, or those aged 85 years and above, constitutes the
fastest-growing age group in the U.S. and elsewhere. To highlight the significance of this trend, the size of the oldest old category is projected to increase by 151% globally by 2030.

Despite these trajectories, many communities are unprepared to attend to the needs of the aged before, during, and after disasters. Advanced age has consistently been found to have a positive correlation with disaster-related morbidity and mortality (Bourque, Siegel, Kano, and Wood 2006). However, age alone is an insufficient explanation for this trend. We need to better understand the most significant factors associated with negative outcomes across the disaster lifecycle (e.g., mitigation, preparedness, response, and recovery) in order to reduce losses within this population. And indeed, there has been important progress in research on the relationship between advanced age and disaster risk in recent decades.

For example, scholars in the public health and biomedical traditions have detailed how age-related changes such as diminished sensory capacity, limited mobility, medication and equipment dependency, and difficulty processing information increase the risk that older people face in large scale emergencies (Mayhorn 2005; Cherniak 2008; Cherry, Silva, and Galea 2009; Fernandez et al. 2002; Calahan and Renne 2007). Mental health researchers offer conflicting conclusions about disaster vulnerability, with some identifying ways in which seniors are likely to suffer more traumatic loss than younger people and others pointing to evidence that advanced age brings coping skills that support positive psychological outcomes (Huerta and Horton 1978; Phifer 1990; Cherry et al. 2009). Scholarship on inequality implicates social and economic marginalization as key factors that push some elders into unsafe living conditions that quickly escalate to life-threatening circumstances and overwhelming losses when hazards deepen the burden on already limited resources (Fothergill 1996; Childers 1999; Klinenberg 2002; Sharkey 2007).
Yet scholarship on this subject has often reduced disaster outcomes among the aged to simple problems of disability, poverty, or social and organizational policy. While such constructs are useful for highlighting various aspects of social vulnerability, the research often uses a condescending approach that inadvertently reinforces older people’s marginal social status. This discourse treats elders as passive recipients of protective action rather than as active stakeholders whose perspectives should be taken into account before conclusions are drawn about their needs, potential contributions, and desires. Beyond matters of equity and research ethics, failure to fully engage these individuals during the research process raises concerns about the validity of research findings and recommendations based on them. The broad implications of this proposition for programs and policies based on such research are a matter of concern, as “there is little point in developing policy goals if elderly people do not regard them as relevant” (Bowling and Dieppe 2005:1550).

Recently, scholars have argued that an over-reliance on quantitative methods and biomedical perspectives within the existing literature inhibits researchers and practitioners from adequately capturing phenomena that have practical implications for seniors’ quality of life (Tuohy, Stephens, and Johnston 2014; Miller and Brockie 2015; Bowling and Dieppe 2005). For example, scholars tend to group “the aged” under a one-dimensional frame of feebleness and infirmity, and often do not distinguish between elders living independently within community settings and those living under institutional or other arrangements (Tuohy et al. 2014). However, there is significant variation in the experience of aging, even within the same age group. Community setting, individual resources, health status, social engagement, living arrangements, and other factors contribute to the experience of aging and the support that one receives in advanced age. These factors also influence the way that elders experience and cope with disaster;
thus, a contextual understanding of older survivors’ lives is necessary to understand the meaning they assign to their experiences and conditions that facilitate or constrain disaster recovery and participation (Tuohy and Stephens 2012; Miller and Brockie 2015).

While much of the literature has examined disaster-related experiences among seniors in hospitals, nursing homes, and other elder care facilities, seniors tend to avoid these settings to the greatest extent possible due to a preference for aging in place (Lloyd 1991). Maintenance of independence, social connections, and life satisfaction are often central to older people’s views of successful aging (Bowling and Dieppe 2005; Roberto, Henderson, Kamo, and McCann 2010). As life expectancy increases, elders strive to maintain independent living arrangements and physical and social health into their later years. In light of this trend, it is increasingly important to understand how to best support older adults in community settings before and after disasters strike.

**Community Conditions, Social Networks, and Disaster Outcomes**

This dissertation uses social capital theory to unpack discourses about the disaster vulnerability and resilience of older people. There is little consensus on definitions of social capital, and scholars have been engaged in intellectual sparring over its conceptualization and measurement for decades (Kawachi, Subramanian, and Kim 2008). However, for purposes of clarity and practicality, this research borrows Lin’s (2001: 29) definition as “resources embedded in a social structure that are accessed and/or mobilized in purposive actions.”

Although social capital can be measured at the individual or community level, it is necessarily dependent on connections between groups. Community residents embed themselves within systems of norms, control, and trust (Putnam 2000; Coleman 1988). People live and age
within larger social units, and community life revolves around mutual dependence on collective efforts at multiple levels to accomplish both individual and shared goals. These concentric social networks are particularly important as people enter advanced age. Social connections serve as conduits for information, support, and access to resources across age groups; however, people at later stages in the life course are likely to need increased social support at the very time this resource is often in shortest supply (Cramm, van Dijk, and Nieboer 2012; Cornwell, Laumann, and Schumm 2008). Put another way, seniors are far more likely than younger people to have emotionally close social ties permanently exit their lives due to factors such as illness and mortality at the same time they are at risk of losing connections to the broader community. This combination of increased need for social support on the one hand, and diminished connectedness at different levels of social contact on the other, highlights the importance of understanding both individual- and community-level factors in examining disaster impacts among older adults. The significance of these two types of social networks is described briefly below.

Interpersonal relationships serve as important sources of information as well as emotional and instrumental support when disasters strike. For instance, Roberto, Kamo, and Henderson (2009) observe that pressure from family and friends served as the primary factor in older New Orleans residents’ decision to evacuate in advance of Hurricane Katrina, despite the fact that official guidance had also advised leaving the city. In this case, communication among individuals made a potentially life-saving difference independent of community-wide evacuation orders. Expanding their scope of inquiry through the short-term recovery phase, Roberto et al. (2010) conclude that re-establishing social networks was a key goal for Katrina survivors as they sought to rebuild their lives. On the flipside, damage to interpersonal connections can have extensive negative consequences. For example, disruption of social support networks was
associated with poor mental health and loss of both formal and informal forms of support among older African Americans displaced by Hurricane Andrew (Sanders, Bowie, and Dias Bowie 2004).

Individual disaster outcomes are also shaped by broader community conditions, and social capital theory offers a useful means of linking these micro-level experiences with meso- and macro-level social conditions (Dynes 2006). For example, studies examining the 1995 earthquake in Kobe, Japan found that neighborhoods with higher levels of pre-disaster social capital were able to quickly mitigate damage and identify common goals for reconstruction, resulting in significantly higher and faster rates of household recovery compared to neighborhoods that had less pre-earthquake social cohesion (Nakagawa and Shaw 2004; Aldrich 2012). The consequences of disjointed social environments were particularly severe for older residents. In a number of neighborhoods, seniors were scattered into temporary housing schemes in which they had few if any social connections and struggled to develop governance structures and other collective endeavors (Tanida 1996). These temporary communities witnessed shocking rates of post-disaster mortality among older residents, many of whom died alone either in their units or outside in the elements after becoming lost in new territory. Rather than linking these untimely deaths to physical frailty or other individual risk factors, Tanida (1996) argues that social isolation created conditions under which elders’ suffering, illness, and even demise often went unnoticed and unaddressed.

Klinenberg’s (2002) “social autopsy” of the 1995 Chicago heat wave, which killed more than 700 people—three quarters of whom were older adults—describes in vivid detail how the relationship between individual and community social networks affected mortality risk within the city’s older population. While at face value this disaster appeared to implicate advanced age
and living alone as the primary determinants of heat-related death, the underlying story challenges this conclusion by shedding light on how neighborhood settings shaped seniors’ daily lives. Comparing mortality rates within two comparable neighborhoods, Klinenberg finds that despite sharing similar objective risk factors such as high rates of poverty and living alone, elders in these communities experienced vastly different disaster outcomes. North Lawndale, the neighborhood with the highest death rate, was characterized by high rates of violent crime, degraded infrastructure, residential dispersion, and other factors that undermined public life, leaving older residents isolated and unwilling to venture from their homes. The comparison community, Little Village, had a far lower death rate and was characterized by bustling commercial activity, low crime, and residential concentration, which created more opportunities for seniors to leave their homes and engage in public life. Conditions in these two neighborhoods had a direct influence on older residents’ opportunities for social activity, in one case constraining and the other facilitating, with life-or-death implications.

Some types of disasters can themselves damage community cohesion, compounding the individual and collective trauma caused by the event itself (Ritchie 2004; Erikson 1976; Elliott, Haney, and Sams-Abiodun 2010). Technological disasters often produce conditions that negatively affect relationships among residents, thereby undermining norms of trust, reciprocity, and other potential forms of social support within the affected area (Ritchie and Gill forthcoming; Ritchie and Gill 2007; Ritchie 2012). These impacts can reach beyond those directly affected by the disaster, disrupting the social fabric of the entire community.

The above examples again illustrate that examinations of how social capital functions at the interpersonal level must account for the fact that individual experiences are situated within broader community contexts. Revisiting the literature on aging and disasters, they also
point to a significant gap in our understanding about how social capital shapes disaster recovery in later life. Importantly, I am aware of no published research that specifically explores the interplay among these levels of social capital among older adults after extreme events, despite clear evidence that each plays a significant role in shaping their disaster outcomes. Applying this perspective will enable a more holistic understanding of the disaster recovery process and shed light on a mechanism that mediates the interplay between vulnerability and resilience in advanced age.

**Research Setting: Boulder County, Colorado**

Boulder County, Colorado has been identified as the area hardest hit by the 2013 flood disaster, and will serve as the primary geographic focus of this research. Home to about 314,000 people, it offers a variety of unique community settings at multiple scales, from unincorporated mountain towns to full-fledged urban communities. The research presented in the following chapters will mostly center on residents in four municipalities due to the severity of flood impacts in each. These areas include the City of Boulder, the City of Longmont, the Town of Lyons, and the Town of Jamestown. I provide a brief overview of each below.

**Boulder, Colorado**

Located at the base of the Rocky Mountains and settled by gold miners in 1859, Boulder is currently the largest city in the county with just under 100,000 residents (U.S. Census Bureau 2014). Known as a college town, Boulder is a relatively young and wealthy city, with a median age of 28.3 years and a median household income of $58,062, compared to 37.2 years and $53,482 within the U.S. as a whole (U.S. Census Bureau 2014). About 23% of residents live
below the poverty level, compared to a national average of 15.6%. About 88% of residents identify as white, 4.7% Asian, slightly less than 1% as African American, and under half a percent as American Indian. Slightly more than 8% of residents identify as Hispanic or Latino. The city’s population is well educated, as 71.5% of the population over the age of 25 has a bachelor’s degree or higher compared to the national average of 29.3% (U.S. Census Bureau 2010). Boulder has a robust local economic base, including national research labs, technology firms, sustainable living industries, and a strong tourism and outdoor recreation industry (Boulder City Council 2013).

**Longmont, Colorado**

The second largest city in Boulder County with just over 86,000 residents, Longmont has a slightly different history than Boulder. It was founded in 1870 as a farming settlement, and attracted a diverse population through the late 19th and early 20th centuries as its agricultural industry grew (City of Longmont N.D.). In the 1950s Longmont’s economy began to shift from an agricultural base to high tech and manufacturing industries, which still dominate the area (Longmont Economic Development Partnership N.D.). Today, the city has an older and slightly more ethnically diverse population than other towns included in this study. Residents’ median age is 36.6, and the racial composition is 83.3% white, 0.9% African American, 3.2% Asian, 1% American Indian, with one-quarter of residents identifying as Hispanic or Latino. Median household income is also above the national average at $60,218, and about 15% of individuals live below the poverty level. The population ranks closer to the national average with respect to

---

2 This may stem from the fact that college students comprise about one-third of the city’s population.
the percent of the population aged 25 years and older in possession of a bachelor’s degree or higher, at 32.7% (U.S. Census Bureau 2010).

**Lyons, Colorado**

The Town of Lyons was founded in 1881, primarily as a sandstone quarry that provided materials for brownstone houses and railroad ballast (Town of Lyons N.D.) Within a few years, the area also began attracting miners leaving the mountains and tuberculosis patients traveling West to benefit from the dry air, many of whom established farming settlements along the area’s creeks (Spring 2001). As implied by its status as a town (as opposed to a city) Lyons’s population size is a fraction of Boulder’s or Longmont’s, with just over 2,000 residents. Its population is also older and more racially homogeneous, with a median age of 40 and a racial composition that is 98% white, 1.4% Asian, less than half of a percent black or American Indian, and 5.75 % of residents who identify as Hispanic or Latino. Similar to Boulder, educational attainment is relatively high relative to the national average, with 56.5% of residents aged 25 years or older holding a bachelor’s degree or higher. Median household income is far higher in Lyons than in any of the other three communities, at $90,603. Only 9.5% of residents live below the poverty level, 4% less than the national average (U.S. Census Bureau 2010). The Lyons community prides itself as a creativity enclave, home to writers, musicians, and visual artists (Lyons Area Chamber of Commerce N.D.). While the stone quarry industry in Lyons is still in operation, the town’s economic base began transforming in recent years into a cultural economy heavily driven by tourist dollars (Veltman 2013).
Jamestown, Colorado

Jamestown is the smallest area of focus in this research, with a population of about 300 people and land area of less than one square mile (Federal Emergency Management Agency 2016). At the time of the floods, the town’s government consisted of only two employees, the town clerk and one water operator (Colorado Department of Local Affairs N.D). Incorporated in 1883 following the discovery of gold and other precious minerals, Jamestown’s history is poorly documented (Town of Jamestown N.D.; Pettem 2011). Its population is older than that of the other three towns, with a median age of 46.6 years. There is limited racial and ethnic diversity: 96% of the population identifies as white, 1.8% as Asian, and 1.5% as biracial, specifically white and American Indian. According to the 2010 Census, three individuals, or about 1.1% of the population, identify as Hispanic or Latino. The population is more educated on average than that of Lyons, with 71.1% of residents aged 25 years or older holding a bachelor’s degree or higher. Median household income is less than that of Lyons, at $51,875; however, the proportion of individuals below the poverty line is far smaller at 5.3% (U.S. Census Bureau 2010). Due to the town’s size, the local economic base is also small, supported in part by the Jamestown Mercantile, a café that also serves as a gathering and entertainment space for residents and visitors (Urie 2010). The town prides itself on its distinctive character and culture as a historic mountain community (Town of Jamestown 2013).

The September 2013 Colorado Flood Disaster: Historical Context

It is important to examine the area’s history with natural hazards to understand factors that have shaped community vulnerability and resilience in the face of this most recent disaster.
Although the 2013 floods have often been described as an unprecedented historical event, flood risk was not a novel concept along Colorado’s Front Range (Taylor 2013). Webbed throughout by a network of mountain canyons and creeks, Boulder County has seen regular flash floods since gold prospectors and pioneers began populating the area in the mid-19th century (Oaks 1982). One of the first well-documented extreme floods, a 100-year event that occurred in the spring of 1894, wreaked havoc in towns that would later be the heaviest-hit by the 2013 disaster (Oaks 1982, Boulder Area Sustainability Information Network N.D.).

Resulting from a combination of heavy rainfall and snowmelt-swollen waterways, this event lasted from May 29-June 2 1894, devastating the Front Range (Urban Drainage and Flood Control District 2008). In Lyons, flooding destroyed nearly 20 houses and businesses, along with the town’s water system, open space, and several bridges; in Longmont, it destroyed infrastructure, ruined crop land, crippled businesses, and flushed away equipment and other property. Jamestown lost businesses, homes, its church, and every building on the north side of James Creek. Water blanketed most of Boulder, taking out nearly every bridge on Boulder creek, inundating crop land, pummeling homes and businesses, and washing away public utilities. Beyond these specific cases, the disaster affected nearly every mining camp and farming community in the county (Oaks 1982). Although this disaster was particularly severe, damaging floods took place regularly throughout the area in the century that followed, resulting in steep social and economic impacts (Smith 1987; Urban Drainage and Flood Control District 2008).

Viewed through this historical lens, the 2013 flood disaster hardly seems unprecedented. Further, some of the atmospheric conditions to which this most recent flood is attributed have been a known hazard for some time. For instance, nearly 30 years ago historian Phyllis Smith wrote:
From the month of May through September of any year...warm air masses from the Gulf of Mexico may circle upslope toward the Front Range, bringing with them storm cells that can produce intense rainfall. The resulting cloudbursts may quickly fill the channels of these small creeks which then take on a vastly different character. After a series of later afternoon thunderstorms along the foothills, the creeks may turn into ‘wild overflowing rivers’ by late evening. These floodwaters may tear away mature trees, wash down huge boulders, gouge out new stream beds, and break apart man-made structures… (Smith 1987: 1)

While some aspects of the 2013 floods were unusual, such as the fact that inundation occurred outside of floodplains due to prolonged ground saturation, many areas were known to be physically vulnerable.

As an example, the confluence of the North and South St. Vrain creeks in Lyons was recognized as a hazard that one local official warned could segment the town into isolated “islands” in the event of a major flood—a hunch that proved correct. In fact, many attribute lives saved in Lyons to the efforts of Boulder County sheriff’s sergeant Dan Barber’s years-long campaign to convince the town’s leadership to install a new flood warning system, which he successfully accomplished in 2008 and which prompted evacuation during the 2013 deluge (Werner 2013). Regional officials shared collective sighs of relief that the floods had not, in fact, been worse.

Gilbert White, known internationally as the “father of floodplain management” for his lifelong commitment to hazards loss reduction, worked for years to convince officials in Boulder to shift away from trying to control nature and toward developing in a way that respects its sporadic upheavals—a campaign that likely curtailed further losses in the city (Sheets 2013). Current efforts in Boulder County to come to terms with risk and strengthen disaster resilience are but another step in what is now a more than 120 year-long dance between development and destruction along the Boulder Creek watershed.
Floods are not the sole natural hazard threat to this region: like floods, fires are also naturally part of Colorado’s ecology. Similar to other areas throughout the United States, Colorado has faced mounting social and economic losses due to wildfires in recent decades, and many of the communities that are vulnerable to floods in this state are also vulnerable to wildfires. In Boulder County, recent disasters include the Left Hand Fire in 1988; Black Tiger Fire in 1989; the Olde Stage fire in 1990; the Overland fire in 2003; and the Fourmile Canyon Fire in 2010 (National Fire Protection Agency 1992; Boulder County Land Use Department 2009; Graham et al. 2012). Wildfires have destroyed several hundred homes and burned over 16,000 acres in Boulder County over the past three decades (Boulder County N.D.). Fire disasters are increasingly devastating because human development continues to extend into hazardous areas, known as the wildland-urban interface or WUI (Radeloff et al. 2005). Local officials are struggling to mitigate an increasingly complex threat, as development in wildland interface environments will place even greater numbers at risk in the coming years.

Further compounding the threat already inherent in this overlap in physical vulnerability between fire-prone landscapes and flood-prone terrain is the direct relationship between these two hazard agents. Wildfires destroy vegetation, making the ground less absorbent. Landscapes become more prone to flooding once they’ve been scorched or denuded by forest fire. Adding to this problem, very hot fires and those that occur on steep slopes tend to exacerbate soil erosion, further increasing the flash flood risk by hindering the re-establishment of ground cover (Gartner, Cannon, Santi, and Dewolfe 2008; Neary, Gottfried, and Ffolliott 2003). Communities located within wildfire-damaged landscapes, then, are at even greater risk for future disaster losses due to flooding.
Indeed, the 2003 Overland Fire may have aggravated flood risk in Jamestown 10 years later. A local newspaper covering residents’ efforts to grapple with the 2013 flood’s impacts observed that:

Joey Howlett, 72, the former owner of the Jamestown Mercantile who was widely seen as the town patriarch, died when a massive debris slide cascading down from the 2003 Overland Fire burn area crushed his home. It killed him in the bed where he slept… The fatal landslide, roaring down from what is known as Howlett's Gulch, is a disaster waiting to happen again… (Brennan 2014).

The Howlett property has been re-zoned for flood remediation and will not be available for residential use in the future. This tragic event is an extreme but powerful example of the complex environmental threats to which communities along the Front Range are striving to adapt.

**Purpose of This Dissertation**

Over the past two decades, scholars have significantly advanced our understanding of factors that increase disaster vulnerability among older adults. As noted above, these perspectives are critical due to this population’s risk of experiencing disaster-related morbidity and mortality. However, there are also important gaps in this literature that must be addressed in order to fully understand elders’ disaster outcomes and experiences. Scholars have not paid sufficient attention to seniors’ subjective experiences of disaster or the extent to which they are conscious agents in their own responses. Additionally, little is known about how these individuals recover from disasters over the long term. While much interest has been sparked by Klinenberg’s (2002) work on the role of social conditions in moderating disaster outcomes among vulnerable elders, few studies have pursued this line of inquiry to examine how seniors draw upon interpersonal and community networks to address disaster-related needs and concerns.
The purpose of this dissertation is to improve our understanding of the role that social capital plays in seniors’ disaster response and recovery. Specifically, this research uses qualitative analyses of elders’ narratives, interviews with community stakeholders, and document analyses to explain how community context and interpersonal relationships influence the way older people interpret and respond to disaster-related experiences. I will ground my findings in the voices of seniors themselves, focusing on their experiences and perspectives on what makes for successful disaster recovery.

**Overview of This Dissertation**

In the following chapter, I elaborate on the theoretical foundations in which this research is grounded, specifically literatures on social capital and social vulnerability. I then outline my overall methodological approach and research design in Chapter 3. In Chapter 4, I detail the role that Senior Serving Organizations (SSOs) play in disaster preparedness, response, and recovery for older adults. I describe how SSOs in Boulder County responded to the floods and the ways in which social capital shaped the effectiveness of these activities. I also examine the ways in which utilization of SSO services varied across communities, and explain the strengths and shortcomings of their support. Chapter 5 examines the narratives shared by seniors who were affected by the floods. In this chapter, I focus on how these individuals described the recovery process, how they drew upon social ties, and how they coped with stressors.

The final two findings chapters more closely examine the issues of vulnerability and resilience. In Chapter 6, I present a case study of community conflict over affordable housing in Lyons to illustrate ways in which the deployment of social capital unfolds within the political economy of a disaster setting. I push the discourse about these issues forward by teasing out their complexity, including their implications for enhancing or attenuating vulnerability. In Chapter 7,
I discuss factors that influence older adults’ capacity for disaster resilience and their contributions to broader community resilience. My concluding chapter includes a discussion of the empirical contributions of this research, identifies broader theoretical implications, details practical implications, and discusses future research directions.
CHAPTER II
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Introduction

This dissertation draws broadly from literatures on social capital, the social impacts of disaster, and social connectedness in advanced age. Few prior studies have sought to integrate these areas of research, which I contend is essential for advancing our understanding of community-dwelling older adults’ experiences with disaster. Below I begin with an overview of the development of social capital theory, including core concepts, critiques, and its application to disaster research. Next, I discuss the social vulnerability perspective within the disaster literature and stress the value of integrating this perspective into social capital theory and to explore the complexities of vulnerability and agency. I conclude by exploring these concepts as they pertain to older people’s lived experiences and disaster outcomes.

Foundations of Social Capital Theory

The concept of social capital is widely recognized in both social scientific and general public discourse. Although specific definitions are contested, as will be discussed later, the term is broadly used to describe social networks and the resources and benefits that accrue from their activation. It has been adopted for a variety of purposes by a wide array of actors, ranging from local community leaders to the World Bank—much to the chagrin of researchers vying to rein it in for purposes of conceptual and methodological clarity. Portes and Vickstrom (2011: 462) note that “the concept of social capital is arguably the most successful export from sociology into the public domain in recent years.” Yet despite its origins in sociology and early application at the individual and group levels of analysis, the basic concept of social capital has undergone
significant transformation. It was popularized by political scientist Robert Putnam, who expanded and redefined it as an explanation for broad social trends at the community, regional, and national scales (Putnam 1993; 1995; 2000). This shift triggered an explosion in the concept’s usage, resulting in thousands of articles, books, studies, and policies organized around social capital and its benefits. Below I trace the development of social capital theory.

Having each generated theories of social capital independently and nearly simultaneously in the late 1980s, Pierre Bourdieu and James Coleman are widely recognized as the founders of social capital theory.3 Yet that is not to say that scholars had not previously recognized the power of social networks, groups, or the conditions that foster successful collective efforts. Robert Putnam (1995) credits de Tocqueville for initiating scholarly reflection on these ideas with studies examining links between civil society and democracy. Even earlier, the underlying idea that “involvement and participation in groups can have positive consequences for the individual and community [was] a staple notion [in sociology], dating back to Durkheim’s emphasis on group life as an antidote to anomie and self-destruction and to Marx’s distinctions between an atomized class-in-itself and a mobilized and effective class-for-itself” (Portes 1998: 2). The sections below trace the development of social capital theory within the sociological literature and its later iterations through growing usage by scholars in other fields.

**Pierre Bourdieu’s Social Capital Theory**

Pierre Bourdieu ([1986] 2000: 286) defines social capital as “the aggregate or potential resources which are linked to possession of a durable network of more or less institutionalized

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3 Although scholars (Woolcock and Narayan 2000; Putnam 2000) credit Lyda J. Hanifan, a public education administrator, for the earliest use of the term “social capital,” sociological theorists were the first to take a systematic approach to developing the concept.
relationships of mutual acquaintance and recognition—or in other words, to membership in a group—which provides each of its members with the backing of the collectivity-owned capital, a ‘credential’ which entitles them to credit, in the various senses of the word.” Connecting this concept to broader theoretical perspectives on the reproduction of social stratification, he argues for moving away from a myopic focus on mercantile exchange in favor of recognizing a more comprehensive “economy of practices” that legitimizes the distribution of power (p.281).

Capital, which Bourdieu equates with power, can manifest itself in nonmonetary denominations that are cultural or social nature in addition to its more tangible and better recognized economic form. Like economic capital, social and cultural capital help individuals in the dominant group reinforce class privileges. Bourdieu notes the possibility of conversion from one form of capital to another (e.g., when actors deploy social capital to gain access to business opportunities or other financial gains) to help enhance one’s position within a given social realm while noting that none of these forms is particularly reducible to the others (Schuller, Baron, and Field 2000; Adam and Rončević 2003).

While his project is concerned with broader power structures, Bourdieu’s concept of social capital focuses on social processes at the individual and group levels. He emphasizes the importance of solidarity and shared identity, which make group memberships inherently exclusionary and therefore reinforce social position. This conceptualization of social capital involves two core elements: the number and quality of resources available through social ties, and the relationships themselves, which serve as conduits for those resources (Portes 1998).

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4 Bourdieu also describes symbolic capital as a characteristic of cultural and social capital, noting that it obscures their role as forms of capital and instead confers legitimacy—in other words, “authority exerting an effect of (mis)recognition” (1986: 283). Also known as prestige or distinction, symbolic capital exists when an external party perceives an agent’s position within a particular social field (e.g., within various exchange relationships), having taken for granted the structure itself (Bourdieu 1985).
Relationships must be durable to provide reliable access to resources, so they require investment and must be sustained through ongoing interaction (Bourdieu 1985; [1986] 2000).

**James Coleman’s Social Capital Theory**

Coleman (1988) offers a somewhat different definition and theory of social capital. He introduces the concept as a potential bridge between sociological perspectives on economic transactions and economic principles from rational choice theory. Coleman (1988: S98) defines this form of capital “by its function” as a social-structural resource that can be exploited by individuals to enhance the benefits of a particular action. According to Coleman, social capital is “not a single entity but a variety of entities, with two elements in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure” (1990: 302). This perspective argues that social capital can take a variety of forms as long as the intended outcome, facilitation of a particular action, is met.

In Coleman’s conceptualization, social capital is generated through the structure of relations itself rather than being “owned” by individual actors and transferred through these connections. Bourdieu’s conceptualization of social capital emphasizes investment in social relationships as a means of generating or increasing access to resources held by individuals in the dominant group, with outcomes accruing to other individuals within that group. In contrast, Coleman’s definition of social capital as a byproduct of social relations envisions this resource as being generated as a collective “good”\(^5\) independent of individual actors’ motivations, with benefits accruing at the group or community level (Adam and Rončević 2003). This distinction

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\(^5\) The term “good” is used loosely here, and is not intended to imply that all its associated outcomes are positive. Social capital can have negative consequences, as will be discussed in greater detail later in this chapter.
creates flexibility in accounting for outcomes across larger scales of analysis, although Coleman argues that some scalar boundaries are important, as described in greater detail below.

Coleman distinguishes among three specific sources of social capital: relations of mutual trust or authority, relations characterized by information potentials, and effective norms and sanctions. Relationships among social agents generate obligations and expectations of repayment, typically on indeterminate timetables and often in abstract forms that may or may not be repaid directly to the lender. Expectations among actors are underwritten by norms and sanctions, which produce the conditions that support trust and conformity by enabling and constraining particular behaviors. Finally, the notion of “closure” within social networks is an important feature that determines the amount of social capital produced. While social capital can be measured across different scales of groups, the nature of the social structure (i.e., how open or closed a group is) influences the extent to which norms can be enforced, sanctions can be effective, and trust can be maintained (Paxton 1999; Portes 1998). The concepts of trust, norms and sanctions, and information flows heavily influenced Putnam’s later work, but the significance of closure was discarded by Putnam, as will be made evident in the following section.

Comparing Bourdieu and Coleman’s perspectives, there are commonalities as well as points of divergence. Both scholars identify relationships or associations as the underlying condition through which social capital is produced. There are few opportunities for the exchange of individual or shared resources among actors that are not affiliated, so despite Bourdieu and Coleman’s lack of agreement about where such resources adhere (e.g., within individuals or in the relations themselves), these scholars’ underlying logics assume that enduring relationships drive social capital accumulation (Häuberer 2011). Boundaries around groups are also essential
for determining the extent of social capital available to their members in both perspectives. Bourdieu ([1986] 2000: 286) points to the institutionalization of relationships through practices such as marriage, which ensures that “each member of the group is thus instituted as a custodian of the limits of the group.” Similarly, Coleman (1988) argues that closure within social structures is important for the existence of both effective norms and trust, without which obligations and expectations between group members could not emerge. Thus, social capital requires sustained, trusting associations within a bounded social group. Yet note that Coleman’s definition of social capital as a public good highlights its availability to all individuals, while Bourdieu’s position that social capital is an elite resource emphasizes its status as a privileged good. Building on this distinction, Bourdieu’s perspective characterizes social capital as a resource held by elites that reinforces the status quo. Coleman’s perspective, on the other hand, applies to communities more generally and is not restricted to a particular status group.

Robert Putnam’s Social Capital Theory

Drawing on Coleman’s discussion of social capital, Robert Putnam’s research tradition constitutes a third branch of the social capital canon that extends into meso- and macro-levels of analysis by examining civic engagement at the regional and national scales (Putnam 1993, 2000; Schuller, Baron, and Field 2000). Putnam (2000:19) defines social capital as “social networks and the norms of reciprocity and trustworthiness that arise from them.” As is evident from his definition of social capital, norms, trust, and social networks are core elements of this framework. According to this approach, community norms—particularly those related to reciprocity—create the foundations for generalized social trust because members of a community that follow shared principles reap individual benefits. For example, Putnam (1993, 2000) argues that people in in communities with high social capital will be more likely to invest in the
collective good without expectation of an immediate return, having faith in the general trustworthiness of others. He also draws inferences related to civic engagement, noting that people who are trusting of their fellow citizens are more inclined to display qualities of civic virtue (Putnam 1993). It is this focus on participatory social behavior, particularly as an explanation (and a potential solution) for a broad array of social outcomes, that triggered a surge in popular as well as academic interest in social capital (Paxton 1999).

In discussing the role of network density (e.g., whether network members are tightly or loosely connected), Putnam (2000) distinguishes between two different dimensions of social capital based on the types of relationships that exist among agents. He invokes Granovetter’s (1973) notion of strong and weak ties as a foundation for detailing the benefits derived from crossing outside of one’s social niche.6 Bonding capital, which is most common among homogeneous groups, functions to promote solidarity and norms of reciprocity between close associates. By its nature, bonding capital is exclusive and is characteristic of closed groups. Bridging capital, on the other hand, provides linkages to assets outside of the social group and correspondingly greater access to information. Groups connected through bridging social capital can be more diverse, and are thus more likely to cross social divides.

While Putnam’s theory builds on sociological concepts of social capital, it also differs in important ways. Similar to those of Bourdieu and Coleman, Putnam’s analysis centers on associational involvement and other forms of collective action, emphasizing the centrality of social engagement. As noted above, it also builds upon Coleman’s emphasis on trust and norms.

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6 Granovetter (1973) argues that close ties, such as the bonds between kind and friend groups, while socially supportive, tend to provide little access to new information or opportunities for upward mobility. He contrasts these with weak ties, or more distant associations that create linkages between social groups, which serve as “channels through which ideas influence, or information socially distant from ego may reach him” (pp. 1370-1371).
However, his framework positions itself between these two scholars with respect to the outcomes of social capital, which he identifies as both public and private goods. That is, in Putnam’s reasoning, collective action produces far-reaching benefits in the form of community-wide stocks of social capital and conditions favorable to individual members. Finally, his distinction between bonding and bridging social capital counters both Bourdieu’s and Coleman’s position on the importance of group boundaries by drawing attention to the utility of different network ties.

Despite its widespread appeal, Putnam’s argument has drawn significant criticism due to its “logical circularity” (Portes 1998:19). Critics note that cause and effect in Putnam’s thesis are indistinct, in that the existence of social capital is inferred from the proposed outcomes of social capital, echoing Coleman’s (1988, 1990) “functional” perspective. It is often unclear, for example, whether factors such as norms and economic conditions influence people’s attitudes and participation in civic life, or whether the reverse is true (Portes and Vickstrom 2011). In addition to highlighting the issue of tautology, scholars have taken issue with the lack of clarity in Putnam’s work (issues that originate in part in Coleman’s theory). These criticisms are directed primarily at his relatively imprecise definition of social capital, use of the term as a substitute for a variety of different concepts, and failure to articulate conceptual distinctions between sources and manifestations of social capital, which further confound operationalization and measurement (Lin 1999; Häuberer 2011; Adam and Rončević 2003). Others have questioned the amount of attention Putnam devotes to class stratification, issues of power, and assumptions about civil society (DeFilippis 2001).

**Nan Lin’s Social Capital Theory**

In an effort to rein in the conceptualization of social capital and preserve its theoretical value, sociologist Nan Lin proposes a network-based theory. Lin (2001: 29) defines social capital
as “resources embedded in a social structure that are accessed and/or mobilized in purposive actions.” He retracts the notion of capital itself as proposed in Marx’s classical theory, emphasizing the process of investment in production with the anticipation of returns due to the creation of surplus value (Lin 1999, 2001). Moving away from Marx’s narrow focus on economic capital and class relations, Lin situates his research in the neo-capitalist theoretical tradition, which includes perspectives on human and cultural capital, and emphasizes the interplay between structural position and individual actions in the capitalization process. He offers social capital as a means of more explicitly articulating this relationship between structure and agency, and for expanding the notion of investments and returns to laborers as well as the dominant class (Lin 2001, 2008).

As is clear from Lin’s definition, his theoretical framework is concerned with specifying social structure and associated resources (embeddedness in networks); opportunities to access those resources (accessibility through social networks); and the ways in which this access facilitates purposive action. Lin (1999, 2001) further posits that a comprehensive analytic model of social capital must contain three core elements that measure the capitalization process. First, it must consider the preconditions and precursors of social capital, including social structure and the implications of each individual’s position within it with respect to opportunities or constraints on investments in social capital. That is, it must identify factors related to social stratification and their potential influence on access to and ability to mobilize social resources. Second, it must delineate the social capital mobilization process, which links access to and use of social capital. Finally, it must consider the process by which capitalization produces returns in the form of an individual’s access to resources. Lin distinguishes between two primary kinds of returns: expressive actions intended to defend against possible loss of resources (e.g., physical
and mental health and life satisfaction); and instrumental actions intended increase to economic, political, and social (e.g., reputation or status) returns.

To address matters of confusion and circularity in the social capital literature and to create a more coherent theoretical foundation moving forward, Lin (2001) offers several critiques of the traditions of Bourdieu, Coleman, and Putnam. Specifying social capital’s roots in individual interactions and networking, he argues that it must be understood as a private—individual or group, as opposed to public—good to avoid its conflation with collective assets that condition its expression, such as trust, culture, and norms. This runs contrary to Coleman’s and Putnam’s inclusion of trust and norms as types of social capital. Lin also discounts the importance of closure in social networks required by Bourdieu and Coleman, emphasizing the utility of varying network densities for attaining different goals, in agreement with Putnam. However, he discounts “functional” perspectives, in contrast to Coleman and to some extent Putnam, criticizing the tautological problems that emerge from mixing outcomes with effects as well as the measurement issues associated with other scholars’ comparatively murky definitions of social capital.

Lin’s framework addresses many of the methodological problems and inconsistencies identified in the sections above. It offers a more explicit definition of the concept and more distinct separation between cause and effect. Additionally, its ability to accommodate analysis across micro-, meso-, and macro-scales of social interaction gives it more flexibility than other scholars’ frameworks allow. Yet, as with most theoretical traditions, there are also shortcomings. Lin’s framework largely fails to incorporate the potential negative effects of social capital, including its potential to exacerbate inequality (Häuberer 2011; Aldrich 2012). Additionally, some charge that its exclusive focus on egocentric networks raises concerns about validity.
(Adam and Rončević 2003). These shortcomings notwithstanding, however, Lin's approach provides a useful theoretical foundation for understanding the social aspects of disasters. Further, its support for analysis of social capital at the individual level makes it well-suited to examine the lives of older adults, as discussed further below.

**Social Capital in Disaster Research**

Similar to its increasing usage in other lines of scholarship, social capital has gained significant traction in the disaster research arena recently. Although scholars have long recognized the important role that social networks play in disasters, consideration of social capital per se is a relatively recent development (Erikson 1976; Kaniasty and Norris 1993; Aldrich and Meyer 2013). The first materials incorporating this concept into the disaster literature have only been written within the last 15 years (Dynes 2002; Ritchie 2004; Nakagawa and Shaw 2004). Since these early studies, however, the amount of research using social capital to examine disasters has been on the rise. Researchers have applied social capital frameworks to different temporal stages of disaster (e.g., preparedness, response, and recovery); toward understanding disaster impacts; and as a lens for examining disaster vulnerability and resilience (Murphy 2007; Elliott, Haney, and Sams-Abiodun 2010; Aida et al. 2013).

**Social capital and Stages of Disaster**

Researchers have identified various dimensions and types of social capital as being relevant and useful at different points in the disaster lifecycle. Aida and colleagues (2013:175) propose three specific sets of “mechanisms that link social capital to various stages of disaster,” highlighting the diverse ways in which community networks and collective action can strengthen the effectiveness of actions taken in response to hazard threats and impacts. With respect to
disaster preparedness, they note that high levels of social capital enhance collaboration and planning activities among civic organizations and promote the establishment and implementation of disaster management policies. Murphy (2007) suggests that existing relational resources within communities such as those between social institutions, organizations, and social groups serve as natural networks that, when tapped into by emergency managers, can be used to promote the development of new community preparedness and resilience initiatives. Koh and Cadigan (2008) build on this perspective, calling for investments to build such linkages between local public health departments and other response organizations. They argue that creating collaborative regional networks would help to generate social capital within and between them that can be drawn upon as a resource in the event of a major pandemic illness outbreak. Shifting the focus to household-level disaster preparedness, Bihari and Ryan (2012) found that survey respondents who perceived greater existing social capital in their community undertook more wildfire mitigation initiatives; engaged in proactive and collaborative emergency planning activities with neighbors and agency personnel; showed greater support for official wildfire mitigation activities; and were more likely to share information about and be engaged in local wildfire planning efforts.

Moving on to the disaster response and relief phase, Aida et al. (2013) posit that social capital can drive resident-driven rescue efforts; volunteerism; financial and material donations; lobbying activities; and the development of local non-governmental organizations. As an example of the first proposition, Hawkins and Maurer (2009) found that low-income residents of New Orleans relied heavily on a combination of bonding and bridging social capital to meet basic needs and obtain assistance with accessing safety during Hurricane Katrina, sharing food, rescuing stranded family members and neighbors, and relaying information obtained through
external networks. Murphy (2007) describes how the town of Walkerton in Ontario, Canada
drew upon existing community networks to respond to an e-coli water crisis, self-organizing in
the absence of official emergency response to manage donations and coordinate a volunteer-driven bottled water distribution process.

Finally, Aida and colleagues (2013) argue that social capital fosters the establishment and
implementation of community-involved recovery planning; assistance with financial and
informational needs; and ongoing lobbying and donation management activities associated with
community recovery. In support of this proposition on planning initiatives, Aldrich (2012)
demonstrates that communities characterized by high levels of pre-disaster social capital in
Kobe, Japan were able to collaborate more effectively than those with lower social capital to
engage in recovery planning, collaborating on rebuilding schemes and creating community-based
organizations to oversee operations. Similarly, Nakagawa and Shaw report that, following the
1991 Gujarat earthquake in the town of Bhuj, the low-income Soni community was among the
fastest to recover, despite its limited means. They attribute this outcome to higher rates of social
capital, reflected in the community’s high rates of internal collaboration, large numbers of
networks bridging to other communities, and active collaboration with outside agencies through
trusted local leaders. Connections to outside networks enhanced access to information and
resources, while trust in leaders enabled cooperation.

Social Capital as a Collective “Good”

While observing the various ways in which social capital can strengthen collective action
and enable access to resources, it is important to note that this collective “good” can also
function in ways that harm particular groups. For example, Moore, Linnan, and Benedict (2004)
argue that the needs of groups external to dominant, cohesive communities are often excluded
from consideration about disaster warning messages and mitigation measures in ways that can exacerbate their disaster impacts. Murphy (2007) demonstrates that, despite the widespread benefits that can extend from community participation and social cohesion in disaster response, place-based group dynamics can also hinder some community members’ efforts in the post-disaster period. For example, residents who lived outside the close-knit community of Walkerton but who were nonetheless directly affected by the e-coli water crisis were excluded from compensation policies, and in some cases this precluded their ability to obtain funding altogether. Aldrich (2012) discusses how high-social-capital neighborhoods in New Orleans used their influence to prevent the siting of FEMA trailers in the aftermath of Hurricane Katrina, pushing them into areas with lower capacity for collective action. Findings such as these highlight that social capital is not a blanket panacea for community ills. Researchers must pay attention not only to the nuances in how people activate their social networks but also in the outcomes of these actions.

**Effects of Disaster on Social Capital**

In addition to exploring the effects of social capital at different stages in the disaster process, scholars have explored disasters’ effects on social capital. For example, Ritchie (2004) was among the first disaster researchers to incorporate social capital theory into the field with her analysis of the social impacts of the Exxon Valdez oil spill. This and subsequent studies used social capital to integrate key concepts from decades of prior research on technological disasters, such as recreancy, the corrosive community, lifestyle and lifescape change, and collective trauma, to explain how their combined effects erode community wellbeing (Ritchie 2004; Ritchie and Gill 2007; Ritchie 2012). She concludes that spiraling losses in social capital hindered the ability of residents of Cordova, Alaska to successfully engage in collective action to
address disaster impacts, and that this loss of social capital ultimately constituted a form of secondary trauma (Ritchie 2004). Importantly, in addition to creating a theoretical framework for understanding patterns in social outcomes following technological disasters, this work drew attention to the ways in which disasters can corrode the social fabric of communities and weaken the social resources available throughout community networks.

Research on natural hazards also supports the notion that disasters can affect social capital across different scales. As an example of individual-level effects, Adeola and Picou (2014) point to declines in personal social capital brought about by Hurricane Katrina as contributing to depression and symptoms of post-traumatic stress disorder among Gulf Coast residents. Findings reported by Tobin-Gurley, Peek, and Loomis (2010) help to explain the ways in which diminished social capital takes a toll on disaster survivors. Their research on single mothers living in Colorado after being displaced from the Gulf Coast by Hurricane Katrina highlights both the importance of informal social ties and the consequences that result from their severance due to disaster. The women in this study had lost the close kinship and friendship connections that previously enabled them to access childcare and other forms of personal assistance through reciprocal exchange in lieu of payment for services. These informal supports had made their lives manageable despite limited financial resources. Catapulted into new environments with few—if any—close social connections, displaced women were forced to navigate a maze of assistance programs and market services to meet these needs. Despite the availability of resources through an array of governmental and charitable services, the women found themselves overwhelmed with the difficulty of actually accessing them.

Disasters can also tax an entire community’s stock of social capital. For instance, Kaniasty and Norris (1993) propose that disasters can overwhelm broader social systems,
thereby diminishing the amount of support available to all community members—not just those directly affected by the disaster. Residents in the post-flood environment described in their study reported a loss of social embeddedness as well as broad declines in perceived social support. Adding to the overall burden of increased demand throughout the social structure, disruptions to community social networks due to member displacement may further erode opportunities for collective action and capacity to pursue shared goals and interests (Chamlee-Wright 2010). This decline in community social capital was observed in Elliott and Sams-Abiodun’s (2010) comparisons of low-income Ninth Ward residents versus relatively affluent Lakeview neighborhood residents following Hurricane Katrina. Their analysis found that Lakeview residents were able to coordinate in order to create a civic organization to address community needs during the months following the storm. By contrast, Ninth Ward residents experienced longer stretches of displacement that in turn further reduced both personal and community social capital. Despite being characterized by dense interpersonal networks prior to Hurricane Katrina, spotty repopulation rates driven by lack of economic resources in the Ninth Ward hindered community organizing and thus prolonged the community’s recovery process.

**Social Vulnerability Theory**

Literature on social risk and vulnerability to disaster has undergone significant transition over the past half century. Classical sociological studies of disaster, which began in earnest in the 1950s and 1960s, called attention to the consistency of findings about pro-social behavior and adaptive capacity in the aftermath of extreme events and were largely focused on debunking myths about human behavior (Tierney 2006). Many of these early studies focused on the socially cohesive “therapeutic community” that emerged under adverse conditions, often failing to recognize variation in disaster impacts (Fritz 1961; Tierney 2007). In the 1970s a new research
agenda began to emerge as scholars began to examine differences in disaster experiences between racial and ethnic groups and incorporating related socioeconomic issues (Bolin 2006). As the study of social vulnerability matured, influential works by scholars such as Blaikie and colleagues (1994) challenged the dominant disaster risk paradigm by calling attention to the inadequacy of work that treated physical and environmental conditions as separate from social processes.

The social vulnerability perspective began to emphasize ways in which risk is produced within larger social, economic, and political systems. Researchers aimed to specify how these systems interact in ways that determine the outcomes of hazard exposure (Cutter, Boruff, and Shirley 2003; Fordham et al. 2013). As an example, Morrow (1999:2) argues that “the impact of a natural event on any given community…is not random, but determined by everyday patterns of social interaction and organization, particularly the resulting stratification paradigms which determine access to resources.” This perspective highlights how socially and economically marginalized populations experience disproportionate risk at each stage of the disaster process. Bolin’s (1986; 2006) research underscores this point, demonstrating that inequalities in the nature and extent of disaster impacts linger, reinforcing disparities between social groups as they attempt to recover.

Wisner and colleagues (2004) propose a holistic framework for evaluating the social production of vulnerability. Captured in Figure 1 below, their Pressure and Release (PAR) model illustrates broadly how disasters occur when natural hazards intersect with populations made vulnerable through distant social processes (Wisner et al. 2004: 51). Similar to Lin’s

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7 The first three chapters of Wisner et al.’s (2004) book is available in the public domain as part of the UNDP follow-up to the Hyogo framework for action and thus available for public use according to U.S. copyright law.
network theory of social capital, the PAR model begins with more abstract *root causes* such as economic and political structures that reflect the exercise and distribution of power in a society and influence access to resources among social groups. These systems act as “mutually reinforcing sources of vulnerability” that then translate into *dynamic pressures* in the form of specific policies (e.g., systematically imposed structural adjustment and austerity measures), processes (e.g., development patterns and environmental degradation), and characteristics of daily life (e.g., local institutions, livelihood opportunities, public life) (p. 53). Those pressures then produce *unsafe conditions*, or the particular forms of vulnerability experienced by a population in a given time and place. These can include inadequate or degraded infrastructure, weak social safety net services, and overall conditions affecting population well-being (or, conversely, ill-being). Disasters occur when populations made vulnerable through social processes across these different scales are exposed to a hazard event that overwhelms local capacity and disrupts routine activities.

![Figure 1 Pressure And Release Model](image-url)

*Figure 1 Pressure And Release Model*
As a standalone item, the PAR model can be critiqued on the grounds of structural determinism and inattention to human agency. However, it is intended to be viewed alongside a companion framework, the Access Model (see Figure 2 below), which focuses on the processes that take place as households respond to a disaster (Wisner et al. 2004: 89). Wisner and colleagues (2004) posit that “the amount of ‘access’ that people have to the capabilities, assets, and livelihood opportunities that will enable them to reduce their vulnerability (or not) and avoid disaster.” While for the most part the processes outlined in this model are intended to be evaluated quantitatively, the qualitative elements of both this and the PAR model are of particular interest to this dissertation.

*Figure 2 Access Model*
Downscaling to the PAR model’s micro-level implications, the Access Model outlines how households experience daily life in the context of unsafe conditions and then follows the progression from normalcy through various stages of hazard exposure, impact, and response. Households experience differential access to social (e.g., information, social and human capital), political (e.g., rights, obligations, expectations), and material (e.g., economic capital, tools, land) resources in daily life. When hazards occur in a particular time and physical space they can result in trigger events, which become disasters as they converge with the local political economy—modeled here as social relations and structures of domination—that shapes household members’ lives. These systems are described in greater detail below.

Social relations involve the flow of money, goods, and the generation of surplus value. Structures of domination include relations between actors at different levels within various social categories as well as the rules that govern them. This “structural scaffolding,” which filters the impacts of hazard exposure, can encompass, for example, dynamics within family units, across ethnic groups, or between individual actors and the state (p.98). The transition to disaster is further shaped by social protections, which include mitigation and other external interventions at the collective level that determine exposure to the hazard agent (e.g., building codes, social safety net services, etc.). Households react, cope, and adapt to the extent that they are capable, mobilizing available resources as the process of disaster unfolds over time. These responses play out in ways that influence vulnerability to future hazard events.

Differences in available resources and social protections leave some households or groups more or less vulnerable relative to others, and these differences are in large part shaped by the political economy. In other words,
Those with better access to information, cash, rights to the means of production, tools and equipment, and the social networks to mobilize resources from outside the household, are less vulnerable to hazards, and may be in a position to avoid disaster...a major explanatory factor in the creation [and distribution of impacts] of disasters is the pattern of wealth and power, because these act as major determinants of the level of vulnerability across a range of people (Wisner et al. 2004: 93).

The Access Model identifies myriad pathways through which social structures and political systems influence the impacts of hazard exposure in a process that unfolds both long before and after the specific hazard agent appears. As noted above, although the Access Model is primarily used as a quantitative framework and can thus be critiqued as being overly deterministic, it provides a useful conceptual tool for evaluating the intersection of social structure and individual agency. In fact, the authors acknowledge that agency plays a crucial role in disaster outcomes and make the case that qualitative approaches are best positioned to evaluate many of the dynamic and context-specific ways in which individual and collective action unfolds, particularly with respect to the functioning of social capital. As envisioned by the authors, this perspective would “permit selectivity in the use of the framework” such that researchers should “choose which aspect they need to visit, and will bring to it the theories they need” to use the model as an organizing tool (Wisner et al. 2004: 122).

Social capital theory is well positioned to integrate concepts from the study of social vulnerability to disaster to better understand how they influence disaster outcomes. Social vulnerability theory provides a means of understanding how the social structure shapes living conditions, access to resources, and social protections. Social capital theory, on the other hand, enables us to examine how people adapt to those conditions, the extent to which they innovate to work around their constraints, and the relational nature of these processes. In other words, while social capital theory provides a lens into how actors collectively generate resources that expand the reach of individual network members’ capacities, the social vulnerability perspective
establishes the conditions that facilitate or constrain the effectiveness of their efforts. Combining these two perspectives helps to shed light on the interplay between these dynamics.

Take, for example, the heavily-discussed case of New Orleans’ Lower Ninth Ward neighborhood. The vulnerability that left this community so devastated by Hurricane Katrina was created over the course of more than a century. Processes of racial segregation, economic disinvestment, and political marginalization left the neighborhood’s heavily African American population in an economic tailspin with few means to push for improvements even before this disaster (Elliott et al. 2010). These conditions created a “perfect storm” in combination with the community’s situation in a location that had inadvertently been made more physically vulnerable by elites’ pursuit of their own economic interests.8

Yet economic conditions in the Lower Ninth Ward also fostered the development of close-knit social networks that supported daily survival through residents’ reliance on one another for informal support and mutual assistance (Tobin-Gurley et al. 2010; Hawkins and Maurer 2009; Pardee 2012). Although bonding social capital and dense social networks served as crucial resources during routine times, they provided limited returns when the storm devastated the neighborhood because network members collectively lacked the resources needed to effectively respond. Dense networks with few bridging connections limited Lower Ninth Ward residents’ access to new information and external resources. The structure of social capital in this community left residents ill-equipped to collectively pressure city officials to support rebuilding efforts after the storm (Elliott et al. 2010; Aldrich 2012).

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8 The construction of the Mississippi River Gulf Outlet, built largely to channel profits to a handful of beneficiaries, destroyed ecological protections and ultimately functioned as a “hurricane highway” that funneled water directly into New Orleans during Hurricane Katrina (Freudenburg et al. 2009).
In contrast, Chamlee-Wright’s (2010) comparison between the Lower Ninth Ward’s Holy Cross neighborhood and the New Orleans East Mary Queen of Vietnam (MVQN) demonstrates how social capital complicates notions of social vulnerability in the disaster setting. She argues that although the two neighborhoods were comparable in terms of economic conditions and other factors associated with social vulnerability at the time of Hurricane Katrina, the structure of social capital within MVQN community was more amenable to collective organizing and political resistance. MVQN residents were able to draw on social resources and shared narratives to push back against the city’s redevelopment planning process, which in turn enabled the community to rebuild much more quickly than others. These contrasting examples highlight complexities behind deployment of social capital in the broader context of social vulnerability. Bridging these two theoretical perspectives helps to move beyond the determinism that often plagues social vulnerability analyses by shedding more light on the interplay between structure and agency.

Underscoring the value of combining social vulnerability and social capital frameworks, Dynes (2006:23) argues that “social capital theory is useful in the way it links microanalysis with macro-analysis.” This observation is particularly relevant in the case of social vulnerability, as incorporating this paradigm into social capital theory can create a path between top-down perspectives on the structural factors that produce disaster risk and bottom-up examinations of individual decision-making in the context of those structural constraints. Indeed, as discussed above, researchers have already begun to incorporate social capital theory to varying degrees in their analyses of the ways in which vulnerable communities and individuals mobilize resources during disasters.
Paring down the argument even further to highlight its utility for this dissertation, a combined approach incorporating social vulnerability and social capital theories holds promise for understanding disaster experiences among the aged. Durant (2011: 1297) holds:

> [B]oth theories combined into one integrated model provide a stronger theoretical framework for studying the vulnerability of elderly people to natural disasters, primarily because an integrated model has the capacity to enhance our understanding and yield more comprehensive information that could be of greater assistance to social scientists and public and private agencies in planning and implementing policies, programs, and strategies for reducing the detrimental effects of a natural disaster.

Findings from research on disaster vulnerability in advanced age support this approach, as does the literature on social capital, which highlights ways in which changes in the size and composition of social networks influence older people’s ability to meet diverse needs. While the body of research examining how older adults utilize social capital in disaster settings is more limited, it nonetheless underscores the utility of combining these perspectives to better explain how the disaster process unfolds among the aged. Each of these research areas is described in greater detail in the following section.

**Vulnerability and Agency among Older Adults**

Research on disaster risk among older adults tends to focus on physical frailty, drawing heavily on biomedical perspectives that frame risk in terms of physical capacity. As noted above, however, disaster outcomes are also shaped by social, political, economic, and other factors (Enarson and Morrow 1997; Cutter, Boruff, and Shirley 2003; Tierney 2014). Further, much of this work fails to identify ways in which elders respond to and cope with disaster impacts, instead portraying them as passive victims. Below I summarize significant themes pertaining to older people in the disaster literature and offer social capital theory as a useful means of exploring individual agency.
Socioeconomic Factors

Socioeconomic status has a significant influence on an individual’s ability to prepare for, respond to, and recover from disaster. Despite often being referred to collectively as a strong economic force, older adults may face significant financial strain in retirement, which can result in inadequate funds to purchase supplies or repair damaged homes (Fernandez, Byard, Lin, Benson, and Barbera 2002; Greenberg 2014). Increases in life expectancy have meant that seniors’ savings have not kept up with their longevity. As growing numbers have advanced into the “oldest old” category many have begun to deplete their nest eggs, forcing them to rely solely on social security and family assistance to meet daily needs (Greenhouse 2012). Thus even seniors who enter retirement with what they anticipate to be sufficient savings to carry through the end of life may find themselves economically vulnerable when unexpected expenses appear, as can occur in a disaster.

The situation is even more perilous for those who advance in age without a financial cushion. Data from the U.S. Census Bureau reveal that in 2012, the poverty rate among adults aged 65 and older was 9.1%. This number rose significantly when factoring in gender and race. While older women overall had a poverty rate of 11%, this figure was considerably higher among African American and Hispanic women, at 33% and 41.6% respectively (Administration on Aging 2013). Given that women generally have longer life expectancies than men, older women—particularly women of color—are likely to have fewer financial resources available for use in disaster response and recovery. Childers (1999) demonstrates that poverty can also hinder disaster-related financial assistance. Examining the allocation of low-interest FEMA loans following floods in New Orleans, she concludes that older female flood survivors were far less likely than older men to have their applications approved. Linking women’s low income status to
lifetime earning disparities compared to men, she echoes other scholars’ calls to situate findings within larger structural contexts.

**Mental Health Status**

Empirical investigations have produced divergent findings regarding the mental health implications of disaster among the aged. While some studies suggest that older adults are exceptionally vulnerable to negative psychological outcomes, a growing body of evidence indicates that elders are actually more psychologically resilient than their younger counterparts (Phifer 1990; Bolin and Klenow 1983; Norris and Murrell 1988; Ngo 2001; Kohn et al. 2005; Cherry et al. 2009; Cherry et al. 2010). Notably, others have found no difference in psychological outcomes based on age, once again calling attention to the need to better understand why particular outcomes are observed (Kohn et al. 2005; Chung et al. 2005). The inconsistency in findings about mental health outcomes among the aged calls attention to this population’s heterogeneity (Cherry, Allen, and Galea 2009). Many researchers have been too quick to characterize the experience of aging as a singular risk factor independent of life experiences and other personal characteristics, similar to how early disaster risk analysts treated social systems as separate from the environmental and physical elements of disasters. Failure to appreciate the complexity of older adults’ experiences may lead to erroneous conclusions about their vulnerability based on age alone that miss the significance of other risk factors.

Recent work by Cherry and colleagues (2015) draws our attention to the complexity of factors that influence mental health outcomes. In examining the combined effects of Hurricanes Katrina and Rita and the BP Deepwater Horizon oil spill on Gulf Coast residents, they found that age alone was not a significant predictor of psychological outcomes. However, age was significant to the extent that older people tended to have a greater prevalence of overall lifetime
trauma, which increased their risk of post-traumatic stress disorder. Pre-disaster trauma and depression have been found in other research to hinder older people’s ability to cope with stressors associated with disaster (Pietrzak et al. 2012). On the other hand, some studies suggest that social support and prior experiences with disaster have a protective effect that can reduce the impacts of disaster-related stressors (Norris and Murrell 1988; Phifer 1990; Weems et al. 2007). Findings such as these suggest that researchers should devote more attention to individual life histories rather than focusing on particular factors in isolation.

**Physical Health and Disability**

Although most people aged 65 years and older in the United States are reasonably healthy and live independently in community settings, myriad age-related changes in physical health and cognitive functioning can place seniors at greater risk than younger people in the context of disaster (Mayhorn 2005; Cherniak 2008; Jenkins et al. 2014). Chronic illness is the most common health problem experienced in old age, and it can leave seniors more susceptible to the physical effects of stress and exposure to adverse weather conditions or chemical agents. Moreover, extreme events can exacerbate chronic health conditions even in the absence of direct exposure to hazard vectors, increasing the risk of medical complications. For instance, one study found that half of elders under treatment for high blood pressure before Hurricane Katrina reported disruptions to hypertensive medication adherence in the year after the disaster (Krousel-Wood et al. 2008). Failure to consistently treat chronic health conditions such as hypertension can increase the risk of cardiovascular problems and other negative health consequences. As people advance in age, the likelihood of experiencing multiple chronic conditions that hinder activities of daily living also increases, making consideration of these conditions particularly important when planning for aging populations in disaster-prone areas.
In 2008, 92% of the population of older adults in the United States suffered from at least one chronic health condition (West, Cole, Goodkind, and He 2010). While many such conditions can be managed through medications, diet, exercise, and other health supportive behaviors, these options are often limited even in non-emergency times by financial restrictions, mobility problems, and unsafe neighborhoods that limit elders’ ability to venture far from home (Cherry, Silva, and Galea 2009). In disaster settings, obstacles to health maintenance behaviors become even more pronounced. For example, power outages can shut off heating and cooling systems—creating dangerous conditions that can tax seniors’ ability to regulate body temperature—and encumber the functioning of supportive equipment (Fernandez et al. 2002; Aldrich and Benson 2008; Fink 2013). Impassable roads and the shuttering of support services may sever access to needed medications or meal delivery services, which can quickly escalate otherwise manageable medical conditions to dangerous levels. Problems accessing supplies and services needed to manage these conditions often persist into the post-disaster phase, as clinics, pharmacies, and other medical services may be crippled or destroyed entirely (Fernandez et al. 2002).

The likelihood of experiencing other types of impairment also increases with age. Pre-disaster disability takes diverse forms among seniors, from subtler issues such as sensory deterioration to more easily identifiable conditions like limited mobility. Without sufficient outreach, seniors with disabilities may miss warning messages, not recognize life-threatening conditions, or face obstacles to receipt of disaster-related assistance (Cahalan and Renne 2007; Wisner and Luce 1993; Stough 2009). For example, failure to incorporate mobility needs into disaster planning can limit seniors’ ability to acquire transportation or other assistive services necessary to respond to hazard threats (Imperiale 1991; Faffer 2007; Jenkins, Laska, and Williamson 2007). Even when transportation assistance is available for frail or disabled elders,
services are often inadequate, poorly coordinated, or even dangerous, as exemplified by a bus that burst into flames, killing 24 nursing home evacuees during an attempt to transport them to safety ahead of Hurricane Rita in 2005 (Moreno 2005; Allen and Nelson 2009). Individuals whose mobility limitations do not directly hinder evacuation may still be less likely to comply with evacuation orders due to concern over accessibility of shelters, and with good reason (Van Willigen, et al. 2002). Persons who choose to evacuate to shelters despite these fears have found themselves in facilities that were inadequate or in which staff was too overwhelmed to effectively respond to their needs (Brodie et al. 2006; Allen and Nelson 2009).

Shifting from ambulatory limitations to less observable conditions, age-related cognitive decline can limit an individual’s ability to both process and communicate information. For instance, older adults experience an increased likelihood of succumbing to attentional distraction, which may result in their failure to comprehend important warning messages. Additionally, deterioration in working memory may lead elders to take inadequate protective action because they are unable to remember the steps required (Mayhorn 2005). Use of complex terminology in disaster-related messaging exacerbates memory-related issues because this type of language further taxes working memory and limits warning comprehension (McLaughlin and Mayhorn 2014).

In addition to hindering recognition of the need for protective action, cognitive impairment can lead to situations wherein injuries or other serious problems go unnoticed by caretakers or shelter workers (Dyer et al. 2006). For example, elders with cognitive problems “may become agitated during a crisis or feel overwhelmed by the crowding, noise, and lack of privacy in a shelter. They may need assistance to ensure that they have their medications, adequate nutrition and water, and assistive devices” (Aldrich and Benson 2008). This possibility
was realized during Hurricane Katrina: “many elders…had no friends or family and were so debilitated they could not advocate for themselves or access the on-site [shelter] services. They languished on their cots suffering in silence” (Dyer et al. 2006: 1). During times of crisis such assistance may be in short supply, meaning that an inability to articulate discomfort may lead to unnecessary suffering when people with cognitive limitations are not sufficiently attended to by trained caretakers or emergency personnel.

Living Arrangements

As noted above, the majority of older Americans live independently within community settings. Most adults prefer to age in place and avoid institutionalization to the greatest extent possible (Lloyd 1991; Cannuscio et al. 2003; Bowling and Dieppe 2005). As a reflection of this desire, only 3.4% of the population aged 65 years and older lived in institutional settings in 2013 (U.S. Department of Health and Human Services 2014). The likelihood of institutionalization increases with age, with 10% of person aged 85 years and older living in these settings.

About 72% of community-dwelling elders in the U.S. live with a spouse, and slightly fewer than one-third live alone. Empirical evidence suggests that older couples living alone tend to experience the highest rates of physical, emotional, and cognitive functioning, while single older individuals living alone tend to score lowest on these measures (Waite and Hughes 1999). Longer life expectancies generally mean that older women are more likely than older men to live alone as they outlive their partners, and as of 2013, 35% of women aged 65 years and older in the U.S. lived alone (U.S. Department of Health and Human Services 2014). Living arrangements can influence disaster vulnerability among community-dwelling elders. For example, during Hurricane Katrina, “many older people died because no one knew where they were” (Jenkins et al. 2007: 50). This was not an anomaly: living alone is frequently associated
with disaster-related mortality among elders (Ngo 2001; Klinenberg 2002; Basu and Samet 2002).

In light of previously discussed findings about older women’s increased likelihood of living in poverty, the literature suggests that they are more likely than older men to experience what some scholars call double jeopardy, or an intersection of multiple disadvantages (Deeny et al. 2009; Durant 2011). Factoring in race and ethnicity may further compound these challenges, as minority status and associated socioeconomic factors, combined with living alone, are associated with negative health status and poorer disaster outcomes (Childers 1999; Waite and Hughes 1999; Bolin 2006). These demographic trends reflect broader social structural issues, and reinforce the notion that there are several layers of factors behind age-related patterns in disaster risk. Returning to Klinenberg’s (2002) analysis of the 1995 Chicago heat wave discussed in the previous chapter, for example, we are reminded that living alone is not synonymous with social isolation. Elders in the two low-income minority communities examined as part of his analysis lived alone at roughly similar rates; however, living arrangements only led to social isolation in the neighborhood blighted by low population density, violent crime, and limited opportunities for social engagement. The various factors that play into disaster outcomes among the aged must be disentangled to fully account for why seniors in particular circumstances are more or less vulnerable in disasters. Otherwise, researchers risk mischaracterizing their experiences.

**Agency and Social Capital**

Despite the potential for factors such as those outlined above to increase seniors’ disaster risk, vulnerability is not the sole determinant of disaster impacts. Shenk and colleagues (2009: 39) argue that “[although] we might consider older adults as a vulnerable population, this is not always true, and we must acknowledge characteristics of strength and resilience older adults
might bring…based on a lifetime of experiences.” Scholars are often too quick to dismiss these individuals as weak and powerless rather than examining how specific conditions can elevate or attenuate their risk. The pervasiveness of “objective” quantitative measures and variable-driven recommendations in studies that speak for older people without seeking to gather perspectives from them reflects this position. As pointed out by scholars who have engaged elders in depth through their research, survey and other quantitative research methods often fail to capture these individuals’ subjective values and concerns (Depp and Jeste 2006; Reischstadt et al. 2010; Tuohy et al. 2014; Miller and Bockie 2015).

Treating seniors as passive, one-dimensional characters also obscures opportunities to benefit from their skills and contributions (Cherry et al. 2009; Shenk et al. 2009). Older adults represent an underutilized resource with respect to their desire to engage in community service, even in non-emergency settings. For instance, Liu and Besser (2003:344) observe that aged residents “may be the only increasing natural resource for volunteering in general, and for participation in community improvement in particular.” This propensity for community involvement has potential for disaster response. Allen and Nelson (2009: 154) contend that “older persons have long volunteered at higher rates than younger persons and currently provide a reliable pool of volunteer disaster force [sic] in a range of disaster planning, support, and recovery efforts.”

Hales (2012) notes that many older community residents often wish to participate in post-disaster civic activities but are hindered by structural barriers that are themselves the result of decision-makers’ failure to consider them as viable contributors to community conversations. Further, studies suggest that seniors may garner positive psychological benefits through service to others (Faffer 2007). For instance, Latidka and colleagues (2011) found that caring for other
disaster survivors during Hurricane Katrina provided nursing home residents with a greater sense of emotional control and prevented them from fixating on their own troubles.\(^9\) Thus, engaging seniors may produce mutual benefits that accrue to them and the communities they serve.

### Networks, Social Support, and Social Capital in Advanced Age

Research on social capital and social connectedness during later stages of the life course holds insights that can inform the literature on aging and disaster. While this broad literature does not consistently invoke the concept of social capital as such, it nonetheless contributes useful information about how older people leverage social ties to meet their needs and gain access to resources, and can inform our understanding of disaster-related decision making. Social networks are a key component of successful aging due to their ability to serve as conduits for information as well as instrumental and other forms of support. Close social ties, particularly family connections, are often essential to caregiving and overall support of seniors’ efforts to age in place (Feld et al. 2006). As with other groups, however, elders draw on different network types to meet different needs. Friendship-focused networks, for example, are associated with reduced mortality risk, and friends can provide an essential source of emotional support (Litwin and Shovitz-Ezra 2006; Fiori, Smith, and Antonucci 2007).\(^10\) It is also important to note that supportive relationships can be multidirectional: that is, elders often support others rather than simply being passive recipients of support, and this may in itself produce additional

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\(^9\) On a cautionary note, Bolin and Klenow (1988) observe that basic necessities such as shelter and medical care must be met before healing or other positive psychosocial outcomes can manifest. Indeed, seniors experiencing disaster trauma themselves may be too overwhelmed managing their own losses to take an active role in supporting their community (Silva, Marks, and Cherry 2009). However, the same is true for younger disaster survivors.\(^10\) Despite these benefits, social connectedness does not have a uniformly positive effect on health outcomes. Keating, Swindle, and Foster (2005) caution that dense bonding networks, while providing essential sources of emotional support and personal care, can have negative effects by hindering linkages to external resources and health support services.
psychological benefits (Thomas 2009). Below I discuss the various ways in which seniors draw upon their social networks, implications for health and wellbeing, changes to network composition in late life, and how these issues connect to broader structural trends, all in relation to the implications for disaster settings.

Subjective assessments of social capital and social support have been identified as important for seniors’ overall health. Research indicates that measures of social capital and perceived social cohesion have a significant positive effect on older adults’ self-rated wellbeing (Cramm, van Diyk, and Nieboer 2012). In contrast, social disconnectedness and perceived isolation are associated with low levels of self-rated physical and mental health (Cornwell and Waite 2009). Thus, it is clear that in addition to having access to resources through social connections, the perception that these ties are viable and available to provide support is also important to health outcomes. These findings reiterate the potential for health supportive benefits that may derive from the post-disaster “therapeutic community” as well as the potential for negative health outcomes resulting from lower perceived social support in disaster-stricken communities (Kaniasty and Norris 1993).

Overall patterns in social engagement change as people age in ways that affect their daily lives and access to resources (Gray 2009). While it is often assumed that these changes are negative, some scholars argue that the story is more complex (Cornwell, Laumann, and Schumm 2008). For example, although broader social networks tend to shrink in size and offer fewer types of social connections as people age, older people also tend to socialize more with neighbors and report higher rates of volunteerism and associational involvement compared to
younger people (Kalmjin 2003; Cornwell et al. 2008). Additionally, these changes may be non-linear. That is, evidence suggests that many people enter and leave seniors’ personal networks over time, so the narrative of network decline may not hold throughout the entire span of advanced age (van Tilburg 1998). In light of this routine variation within elders’ social environments, post-disaster relief and recovery operations may open the door for community involvement, volunteerism, and other changes—positive or negative—to network composition.

Kin relationships often begin to comprise a larger portion of older people’s social networks as they enter late life. However, spouses and non-kin individuals are more likely than children or other family members to provide care and practical support (Feld et al. 2006; Gray 2009). Reluctance to burden children may in part contribute to this pattern, as aging parents often struggle with the role reversal involved with being cared for by their offspring (Thomas 2009). This is important to consider when examining the sources from which seniors seek assistance when unexpected needs arise. Further, researchers offer conflicting conclusions about whether seniors become more emotionally close to family members as shifts in network composition occur, with some arguing that these shifts result in closer bonds and others stating that these connections are mostly practical in nature (Seeman and Berkman 1988; van Tilburg 1998; Cornwell et al. 2008). These discrepant findings highlight the need to better understand variation among bonding ties to identify how different kinds of connections support emotional needs. Relating this issue to the disaster context, assumptions that seniors can or will rely on children and other family members for emotional support may not always hold.

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11 Challenging Putnam’s (2000) conclusions about the decline of civic virtue, Cornwell and colleagues (2008) suggest that older adults’ greater involvement in associational activities supplement opportunities for social contact lost through bereavement.
Characteristics of older people’s social networks tend to reflect conditions that shape social relations at other stages of the life course. For instance, British working class retirees report fewer contacts with and less support from neighborhood and associational connections compared to white collar retirees, reflecting the persistence of class inequality (Gray 2009). However, it is important not to oversimplify the ways in which these patterns may influence social life in old age. As an example, women tend to have stronger ties to kin-based connections than men due to their heavier involvement in caregiver roles, and researchers suggest that this can ultimately have a negative influence on their lifetime professional accomplishments (McPherson, Smith-Lovin, and Brashears. 2006). However, older women are significantly more likely than older men to report receiving and providing support through diverse personal networks that bridge outside of familial ties, indicating that they are able to draw upon a wider array of resources in times of hardship (Antonucci and Akiyama 1987; Cornwell 2011). More research is needed to better understand the ways in which broader social conditions shape older adults’ social networks and access to social capital, but in the case of gender research suggests that women have a social advantage over men (Roberto et al. 2009).

*Seniors’ Social Networks in Disasters*

As is the case with other age groups, the importance of social support networks is often amplified for older adults during and after extreme events. Friend and family networks, for example, are often essential sources of instrumental and financial support (Kaniasty and Norris 1995). Disasters can disrupt seniors’ routine activities and relationships by dislocating them from important social environments. This can reduce the number of contacts they have to rely on for assistance with practical needs as well as close confidants who play an important emotional support role, which can in turn result in declines in both mental and physical health. For
example, Sanders and colleagues (2003) found that residents displaced by Hurricane Andrew were left feeling isolated and depressed in substandard living conditions, experienced declines in physical functioning, and were unable to access assistance with basic needs due to their physical separation from formal and informal support systems. Underscoring the implications of lost social connections for health, Jenkins et al. (2014) and identify diminished social support as contributing to increased post-disaster morbidity among the aged, while Takeda (1996) attributes mortality among community elders following the Kobe earthquake to a lack of social cohesion and support.

Roberto, Camo and Henderson (2009) report that older Hurricane Katrina survivors relied heavily on support from friends and family to evacuate from New Orleans, find temporary housing, and meet ongoing needs after the storm. While these connections were essential sources of assistance, the scope of the disaster was taxing on support networks and strained relationships as physically proximate contacts were also coping with disaster impacts. These findings support Norris et al.’s (1993) proposition that the amount of support available through community networks is finite and underscores the importance of diverse bridging networks in addition to close bonding networks (Elliott and Sams-Abiodun 2010). Later work by Roberto and colleagues (2010) concludes that maintenance of social connections and helping out others within their families and communities brought meaning to older female survivors’ lives and helped them maintain a sense of independence. Similarly, Tuohy and Stephens (2012) point out that narratives from older New Zealand flood survivors also reflect the notion that being able to give as well as receive support is central to a sense of self, hinting at the broader concept of reciprocity. These patterns pinpoint the need to balance our understanding of how seniors
mobilize social resources for their own needs with more attention to the ways in which they are motivated to “pay it forward” with other contributions.
CHAPTER III
RESEARCH METHODS

Introduction

In this dissertation I incorporate data collected between December 2013 and March 2016 through in-depth interviews and analysis of documents pertaining to flood response and recovery. Below I outline the tradition of qualitative disaster research and identify key methodological issues in the study of social capital. Next, I summarize my research design and discuss my data collection methods in greater detail. Finally, I describe my data analysis process and conclude with reflections on methodological challenges and insights gained through my fieldwork.

Qualitative Methods in Disaster Research

Sociologists studying disaster often remark that these events bring existing aspects of social systems into high relief, offering exceptional opportunities to study issues that are otherwise difficult to observe (Merton 1969; Fothergill and Peek 2004). This perspective is well articulated by Kreps (1984:310) with the observation that:

\[
\text{disaster studies provide rich data for addressing basic questions about social organization—its origins, adaptive capacities, and survival. These questions were considered fundamental by the classic figures of sociology and the earliest students of disasters. Devoting sustained attention to them will enhance sociological knowledge and contribute to disaster prevention.}
\]

In my dissertation I follow this tradition in sociological studies of disaster by using older people’s disaster experiences as a means of illuminating larger processes that affect their lives on a routine basis. In doing so, I draw upon research methods common to sociological studies both within and outside of the disaster arena.
Disaster researchers have long utilized qualitative methods because of their utility for identifying the needs of underserved groups, comparing the contexts in which disasters occur, and revealing the inaccuracies in “common sense” assumptions about disaster outcomes (Phillips and Morrow 2007; Tierney 2007). Of particular interest for this research is qualitative inquiry’s utility for explaining why people behave in particular ways and how their decisions are shaped by the social environment (Stallings 2002). To understand these factors, qualitative disaster researchers devote particular attention to the contexts in which disasters unfold, situate their observations in rich detail about participants’ lived experiences, and synthesize this information to identify and sharpen their understanding of key concepts that can then be explored more systematically with future inquiry (Stallings 2002; Phillips 2014). I have chosen to use data collected through in-depth interviews and document analysis for this project because such data provide several advantages over the quantitative and community-level indicators employed in prior studies of both advanced age and social capital in disaster settings. My research is fundamentally concerned with exploring how older adults experience and respond to disasters, the meanings they assign to these experiences, and the role that social context plays in shaping their outcomes; thus, qualitative inquiry is best suited to answer these questions.

Qualitative Methods in Social Capital Research

My review of the literature in the previous chapter discussed scholars’ ongoing concerns with the conceptualization and measurement of social capital. Some researchers seek to identify general constructs that can be compared systematically across populations and scales, while others caution that boiled-down measures of this multi-dimensional concept can offer efficiency and parsimony at the expense of validity. For example, quantitative models often generate proxies for social capital using available data rather than employing measures designed to meet
the theoretical specifications of the concept. However, such measures can also fail to adequately capture the phenomena they claim to represent (Van Deth 2003). While survey data and quantitative methods are often useful and appropriate means of exploring social capital as conceptualized within a particular line of inquiry, further empirical advancement in social capital research more broadly requires greater attention to these issues of validity. This must involve more precise specification of the phenomena under scrutiny and greater conscientiousness in their operationalization.

As an example, take the concept of trust, which is often explored in social capital research. Patulny (2004) takes exception to the overly broad definitions of trust often applied in social capital research, arguing that social cohesion involves two distinct forms of trust, generalized and particularized, that manifest themselves through different kinds of social networks and can be captured through different methods. Particularized trust is attached to specific individuals, and generates cohesion based on duty to a shared network. The particularized trust that bonding networks generate through established norms and sanctions within closed ranks creates conditions that enable resource mobilization among network members—a process best captured through rich qualitative analysis (Patulny and Svendsen 2007). Generalized trust, on the other hand, applies to broader norms and practices embedded within an open social structure, and is not contingent upon familiarity among individuals (Patulny 2004). The resources accessible under conditions of generalized trust, such as collective action or broad public “goods” provided through welfare states, are more easily attained through

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12 In agreement with Lin (2001a, 2001b), I conceptualize trust as an important condition that facilitates access to social capital through network mobilization rather than as a form of social capital itself.
bridging networks and are often better measured through quantitative analysis of survey or other macro-scale data (Patulny and Svendsen 2007).\textsuperscript{13}

Other scholars weighing in on the validity problem have stressed the importance of context, arguing that social capital is a relational, structurally embedded resource that must be understood “in its place” as experienced in everyday exchanges between actors. Rather than establishing generic measures a priori, they argue, social capital must be operationalized within people’s lived reality (Stephens 2008). Touching on both of these concerns, Schuller et al. (2000: 28-29) argue that problems related to validity involve matters of both context and scale:

It looks clear that the validity of social capital depends critically on its contextualization, and it takes significantly different colours according to these different contexts…Some measures may appear universal—for example, individual attitudinal responses to questions on trust…but even here the context is crucial, since people will give different answers according to whether they take the question to refer to their immediate social surroundings or to be pitched at a much wider level. Generally, social capital will be operationalized very differently according to the focal issue.

Scholars studying social capital mobilization in the context of extreme events have offered similar critiques about scale and validity. While quantitative community-level assessments are well suited to understanding collective action and general rates of recovery, the ways in which people activate their personal networks and the outcomes of these actions at the household level are often difficult to capture using such assessment methods. For example, Wisner et al. (2004: 97) posit that many aspects of coping and adaptive strategies employed in

\textsuperscript{13} It is important to note that the distinction between bonding and bridging networks is not of itself contingent on any specific methodology. The process of resource mobilization within social networks must be explored through empirical methods appropriate to the research question. Further, resource mobilization within each type of network can generate positive or negative externalities for network insiders and outsiders; hence, the term “good” is employed as a conceptual tool rather than as an assessment of objective value or benefit (Patulny and Svendsen 2007).
response to disaster, such as the mobilization of social capital, “can usually be described in a qualitative manner only” because they are ephemeral, contextual, and often go unnoticed by outsiders. Chamlee-Wright and Storr (2011: 272) support this observation, arguing that “the ways in which socially embedded resources are woven into these strategies are particularly difficult to capture through more distanced quantitative analysis.” Instead, they use personal interviews to create “a window through which the researcher can see more clearly which social norms, cultural tools, and other socially embedded resources are being deployed as residents and other stakeholders carve out strategies for individual recovery and community rebound” (Chamlee-Wright and Storr 2011: 272). Following a similar line of reasoning, I argue that the poorly understood processes through which older adults access needed resources to offset disaster-related losses are best evaluated using rich, qualitative data. These data can better account for the ways in which context, both broadly in terms of the disaster and community settings and more specifically with respect to people’s personal networks, shapes outcomes.

**Research Design**

The overall design for this study is represented in Figure 3. This research contributes to the state of knowledge about the social impacts of disaster among the aged by exploring these individuals’ disaster experiences in robust detail. I introduce the social capital framework to call attention to the ways in which seniors’ agency and decision-making complicate simplistic narratives about their vulnerability. By bridging perspectives on social vulnerability with social capital theory, I contribute a more nuanced perspective on the challenges that seniors face in the context of extreme events and expand the discourse to consider the active role they play in their own and their community’s disaster response and recovery efforts.
To answer the research questions outlined above, I draw on three main sources of data. First, I rely on in-depth personal interviews with residents affected by the 2013 Colorado floods to obtain rich information about their experiences “through their own eyes.” Second, I incorporate structured personal interviews with key stakeholders to better understand local conditions within each community and the ways in which these factors may have influenced seniors’ lived experiences. Third, I analyze secondary data in the form of reports, meeting notes, and other documents to develop a clearer picture of the flood response and recovery efforts within four Boulder County communities.
By incorporating diverse sources and types of information into the corpus of data for this study, I examine social capital at the household level while situating individual narratives within a broader community context. Evaluating emergent themes from multiple angles also allows me to examine them in greater depth than seniors’ narratives alone would allow. More importantly, however, this kind of triangulation is an important methodological technique that helps to verify and validate research findings (Patton 1999). Phillips asserts that obtaining diverse perspectives in qualitative disaster research is critical because “multiple realities exist. The lived experience of an event needs to be uncovered and from perspectives crossing an array of social actors” (2014: 29; emphasis in original). In support of this position, I have attempted to strike a balance of different perspectives and information sources to create as comprehensive a picture as possible.

Sample Design

I chose the four communities included in this study on the basis of size, community setting (e.g., urban and rural/mountain), and severity of impacts resulting from the floods. As described in the introductory chapter, the study sites include Jamestown, Boulder, Lyons, and Longmont, all of which are located in Boulder County, Colorado. I began my fieldwork by identifying senior-serving organizations in Boulder County and within the cities of Boulder and Longmont, and reaching out to individuals who played a key role in coordinating services and interfacing with this population. Some of the organizations were specifically oriented toward serving older adults, while others interfaced with this population as part of their broader mission, such as emergency response, relief, and recovery agencies. I sought to include perspectives from individuals engaged specifically in disaster-related work as well as well as those whose work entailed routine service provision in non-emergency times. Interviewees in this category included
government workers, nonprofit organization employees, elected officials, and informal community leaders. Due to their small size, Lyons and Jamestown offered fewer specialized formal organizations and titles; thus, in these cases, I reached out to community stakeholders who coordinated activities, liaised with outside organizations, or provided services on a more informal basis.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Interviewees</th>
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<tbody>
<tr>
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<tr>
<td>Female</td>
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<tr>
<td>Male</td>
<td>18</td>
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<td>Age Group Breakdown</td>
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<td>60-69 years</td>
<td>19</td>
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<tr>
<td>70-79 years</td>
<td>17</td>
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<tr>
<td>80+ years</td>
<td>6</td>
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<tr>
<td>Boulder</td>
<td>5</td>
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<tr>
<td>Longmont</td>
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<td>Lyons</td>
<td>18</td>
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<td>Jamestown</td>
<td>14</td>
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*Table 1 Resident Sample Characteristics*

I used a purposive sampling approach to select older adults for recruitment to ensure that I was able to obtain a reasonably diverse sample (see Table 1). I sought to include seniors who experienced a range of flood impacts (e.g., modestly affected to near-total loss), were positioned at various points in the late life course (e.g., “young-old” to “oldest-old”), and represented different status groups (e.g., prominent community members versus those less involved), with a relative balance of gender identities (recognizing that women tend to outlive men and that this may be reflected in my sample). After contacting or being contacted by study participants through various gatekeepers, I relied on purposive snowball sampling to identify additional eligible residents while maintaining the abovementioned criteria. While the broader populations covered by my research were overwhelmingly non-Hispanic white in composition, I attempted to reach out to members of the largest ethnic minority group in the area, Latinos, to create a representative sample. I identified potential participants from these communities through local
gatekeepers; however, these efforts were largely unsuccessful due primarily to outdated contact information, non-response, or my inability to reach out to participants in Spanish. I sought to supplement this lack of representation in my resident sample by reaching out to organizational representatives in my study who had direct contact with Hispanic seniors and informed perspectives on issues affecting this population. It must be noted, however, that older Latinos’ perspectives are not widely represented in this study (n=1), and that their experiences may differ significantly from those presented here.

Secondary data included in this study covered a range of documentary materials. I began data collection by visiting each city or town’s website and collecting flood-related reports, resource sheets, and status updates. I also incorporated newspaper articles from local sources and messages posted to public internet discussion forums focused on local communities. I included materials from local and external non-governmental organizations as well as updates, action plans, and reports posted to the websites of county, state, and federal organizations. Each item was dated and stored digitally. Finally, I collected an array of materials from interviewees, visits to senior serving organizations, and attendance at community meetings.

**In-Depth Interviews**

In the weeks and months following the September 2013 floods, I tracked key organizations and actors in Boulder County through online status updates, news reports, and community meetings to identify stakeholders who could provide useful information about disaster impacts among older adults in the area. Between September and December 2013, I held eight informal meetings with representatives of senior-serving organizations to better understand the issues salient to community elders and inform my research questions. I then developed research instruments to pilot test my discussion guides with five additional organizational
employees and nine older adults\textsuperscript{14} between December 2013 and December 2014, bringing the total number of preliminary consultations to 22 individuals. These participants represented a range of community service providers, employees within an institutional setting, institutionalized flood-affected residents, and seniors living independently in the community.

In May 2015 I began conducting additional fieldwork. This involved first identifying additional organizational representatives and community stakeholders to gather deeper insights into issues affecting the older population and assist with my efforts to recruit flood-affected residents. After finding potential key informants within organizational settings or community leadership (in the case of smaller towns), I reached out via phone or email as appropriate to provide an overview of my research and request an interview. Upon agreement, I scheduled and conducted interviews at a location of each participant’s choosing, generally in the person’s office or a café.

Interviews with these stakeholders ranged in duration from 30 minutes to two hours, but took on average about one hour. Most conversations were audio recorded with the participant’s permission, although I relied solely on written notes in two cases due to ambient noise that would have hindered the audibility of recordings. All participants agreed to be recorded, and outside of the two instances where recording was infeasible, I used two digital voice recorders (this redundancy provided backup in the event of malfunction or file corruption) and took handwritten notes that were then digitized shortly after each interview. I presented each participant with two informed consent forms, one to be signed and dated for my records, and the other for the individual to keep for their records.

\textsuperscript{14} One interview was stopped and discarded due to concerns about the participant’s cognitive functioning.
I conducted stakeholder interviews using a semi-structured interview guide (see Appendix A). In some cases, irrelevant questions were skipped or additional probing questions were used as appropriate, depending on the nature of the organization or the interviewee’s role in relevant activities. I conducted a total of 30 stakeholder interviews over the course of this project. These data are further informed by informal meetings with 8 other community leaders and stakeholders who volunteered useful observations relevant to community context during the course of my research activities.

In-depth personal interviews with 42 flood-affected seniors comprise the cornerstone of my research design. To identify residents in each community for inclusion in the study, I requested recommendations through key informants and asked these individuals to publicly post or disseminate recruitment flyers when appropriate. In cases of referral, I contacted potential participants by phone or email as directed. In most cases, my point of contact reached out to the participant in advance to ensure that the individual would be willing to speak with me. On two occasions, I reached out to seniors directly upon meeting them at official functions. Upon calling or emailing, I introduced myself, referenced our shared connection if applicable, and summarized my research before asking whether the person was still interested in participating. Interviews were conducted in a location of the participant’s choosing, typically in the person’s home or a local café.

At the start of each interview, I summarized the information in the informed consent form, reminded participants that their involvement was voluntary, and reiterated that we could skip any questions that the person did not want to answer. I then encouraged participants to take time to read through the informed consent form and answered any questions raised. Before beginning each interview, I asked participants their age to ensure that the information in my
records was correct (referring parties or participants themselves would generally volunteer this information in the process of setting up the appointment). Interviews ranged from approximately 45 minutes to three hours, but on lasted on average about two hours. I recorded each interview using two digital voice recorders with the participant’s permission. None of the interviewees refused being recorded; however, several took great interest in my detailing of efforts that I would take to ensure that personal identities would be obscured to the greatest extent possible in reporting research findings.

I conducted interviews with seniors using a semi-structured interview guide, which allowed flexibility in requesting additional information or elaboration as needed (see Appendix B). In most cases, discussions naturally unfolded in chronological order. I initiated conversation by asking about respondents’ social worlds and routine activities prior to the flood before moving into flood-related experiences to explore their perceptions about how and to what extent social and community life had been affected by the disaster. Questions covering challenges that interviewees experienced as a result of the floods and how they went about addressing their needs enabled me to draw insights about decision-making and social capital in relation to concepts from the literature on seniors’ disaster vulnerability (e.g., receipt of warning messages, financial disruption, social network mobilization). I took handwritten notes during each interview and in most cases reviewed and then typed these notes within 24 hours.

I collected documents throughout the course of this study as a third data source, beginning in September 2013. I gathered articles online from two local newspapers, the Longmont Times-Call and the Boulder Daily Camera, to understand the context and chronology of events within the study communities. These articles provided important information about activities involving community leaders, collective efforts, significant events, and political issues
that unfolded during the recovery period. Additionally, I attended flood recovery meetings to collect pamphlets and information sheets and took hand-written notes about relevant issues such as assistance programs, infrastructure repair updates, and progress reports. I collected materials shared by stakeholders and residents during personal interviews, including books, photographs, spreadsheets, articles, and other documents, scanning and dating items before filing them. Each town maintained up-to-date websites with meeting minutes, video recordings, archived presentations, or meeting agendas, which I saved when the information included was relevant. Finally, I scanned public online discussion forums for relevant conversations about flood-related issues and concerns as context for issues raised in resident and stakeholder interviews.

### Reflections from the Field

**Gaining Entrée**

The connections I made with key personnel involved in flood recovery activities or senior services helped me gain entrée in each community, as these individuals provided me with useful information and introduced me to networks through which I could gather contextual data or recruit participants. The relationships I forged in the field were particularly important for understanding the local culture within Jamestown and Lyons. My early project design had not included plans to collect data in either of these heavily-affected areas due to media reports that the presence of outsiders—whether sightseers, volunteers, or official responders—was exacerbating disruption caused by the disaster itself. Additionally, researchers and students from another nearby university were heavily involved in local flood recovery in the Town of Lyons and had launched a number of data collection activities. With the region under a magnifying
glass, I opted to delay data collection until the fall of 2015 to avoid contributing to research fatigue.

These concerns were later validated through formal and informal conversations with residents and stakeholders who expressed earlier frustrations with the presence of outsiders. Further, although this was a practice in which I never engaged or intimated that I would use, I was cautioned by gatekeepers on a few occasions not to press residents to participate in my research due to concerns about pervasive flood-related trauma. By waiting until local conditions stabilized and later making contacts who were willing to “vouch” for me, I was able to connect with individuals who were willing to share their stories and introduce me to others who were receptive to participating in such research. Conversations with several gatekeepers about my recruitment process led me to maintain this cautious approach in the smaller communities and focus more closely on building a rapport with key stakeholders.

Perhaps not surprisingly, gaining entrée entailed a different process and strategy in Boulder and Longmont. Differences in the size and terrain of these two communities relative to Jamestown and Lyons led to flood damage that was more sparsely distributed throughout their geographic boundaries. In terms of outreach, this also meant that my interactions in a single instance had far less influence on my overall recruitment process. That is, residents in these more urban locations had far fewer shared connections, and in general identified less as residents of their city in terms of cultural influence or affiliation. Thus, I expanded my recruitment strategy in Longmont and Boulder to include distribution of flyers and general calls for participation. Additionally, because residents in urban areas were farther removed from decision-making entities than those in smaller towns, I relied more heavily on service providers or gatekeepers
within other social networks for recruitment in these areas than on community leaders who could make far-reaching connections.

**Community Dynamics and Researcher Identity**

The relationships I formed with residents in Jamestown and other mountain communities also helped sensitize me to concerns shared by some mountain residents about what they felt was an inherently exploitative relationship between outside researchers and their communities, as well as to the often antagonistic relationship between “flatlanders,” or those from lower elevations, and those living in these remote areas. This cultural division was particularly relevant to my work due to my affiliation with the University of Colorado Boulder, which some participants openly viewed as an elitist institution that generally did little to engage or support the surrounding communities in routine times, and particularly in the context of flood recovery.

Although the dynamic was somewhat different, I came to recognize similarly problematic undercurrents in my affiliation as a resident of the City of Boulder. For example, several participants expressed surprise at my genuine interest in certain issues due to the city’s high proportion of wealthy residents and its “crunchy” or “granola” culture. On several occasions I found myself invoking my outsider status as someone who grew up elsewhere to help reconcile this apparent dissonance. In recognizing the ethically problematic nature of these dynamics, I resolved to develop a respectful and reciprocal relationship through sustained interaction with one informal organization and to partner, as appropriate, to disseminate my research findings in a way that is useful to other local organizations in the future. To date, this has involved regular attendance at meetings, partnering with a small working group to develop guidelines for external service provider organizations working in mountain communities, and collaboration with one
local resident on an article for the *Natural Hazards Observer* discussing the importance of culturally responsive emergency management practice.

**Additional Methodological Considerations**

Although qualitative researchers often use a short questionnaire to collect and compare demographic information such as details about income and educational attainment from research participants, formal and informal conversations that I conducted during the pilot phase of this research indicated that this procedure would in some cases be inappropriate or problematic. For instance, on several separate occasions, residents and stakeholders discussed their own or other community members’ suspicions about outsiders’ motives in collecting personal information, discomfort with sharing details routinely required by government assistance programs, or concerns about how formal organizations may or may not use such information outside of their stated purposes. Concerns of this nature led me to consider several challenges. First, although I could provide assurances that details shared with me during the course of my research interviews would be held confidential, Institutional Review Board protocol specifies that researchers cannot guarantee respondents’ full anonymity, as the University retains the right to audit and inspect researchers’ records. Second, the process of responding to repeated requests for information about income and other personal details was described by some key stakeholders as an emotionally difficult and sometimes traumatic process for residents who lived in remote areas in part because they held their privacy paramount. While the most intensely private residents were unlikely to participate in this research under any circumstances, I noted that suspicion of outsiders’ requests for seemingly unnecessary information was reasonably common in some areas. Third, concern about financial scams targeting seniors is common in post-disaster settings, and may itself hinder forthright responses to financial questions. Fourth, discomfort with
nonresponse toward questions about income is a broadly recognized problem in social science research, independent of age group (Moore, Stinson, and Welniak 2000). In light of these concerns, I decided to capture information about age, race/ethnicity, gender, marital status, parental status, and education during the course of the interview process and omit questions about personal finances. Although this information would have been useful for comparison purposes, I determined that probing about these details could in some cases be harmful to participants, compromise the depth of information I would be able to capture, or hinder my ability to build a positive rapport with individuals and their broader networks.

**Data Analysis**

As noted above, I digitized all handwritten notes by typing them in a word processing program after each interview. I also maintained records of miscellaneous notes and research memos in digital form. All audio recordings were professionally transcribed using either a transcription service or student employees bound by confidentiality agreement. I reviewed each transcript and minimally edited as needed for accuracy or clarity upon receipt. However, in observing my commitment to “give voice” to research participants, I kept modifications to a minimum.

I used NVivo 10 to code all transcripts, interview notes, memos, and other digitized data using a three-step modified open coding strategy (Saldaña 2009). My first cycle coding strategy involved creating a list of initial codes for concepts as shaped by my interview guide, research questions, and codes used to analyze the pilot research (Saldaña 2009). Next, I analyzed ten percent of my interviews using this list and further refined the code list by incorporating new concepts and creating sub-codes (e.g., moving from “relationships” to “relying on friends”). I then reevaluated the coded data to generate new high-level categories as needed to capture
concepts that emerged and again assessed how well my broad categories fit the lower-level codes (Corbin and Strauss 2008). I used this updated code list moving forward with subsequent analyses as additional data were collected. In my second cycle of coding, I began to sketch out relationships between my categories and broad themes. Finally, I collapsed, split, or redefined themes and created diagrams to organize concepts and illustrate how the processes that emerged in my analysis related to one another.
CHAPTER IV
ORGANIZATIONAL PERSPECTIVES

Introduction

This chapter discusses the role that senior-serving organizations and other organizational networks play in shaping older adults’ disaster outcomes. In the following sections I argue that senior-serving organizations and the social capital they possess can connect community-dwelling older adults with critical resources when disasters strike. I begin with a brief discussion about social capital within organizations in the context of disasters, particularly the importance of enduring relationships and trust for strengthening organizational response and relief activities. I then argue that these same conditions generate social capital within older adults’ service provider networks that can be used to enhance disaster-related services for this population. Next, I focus on the ways in which organizational social capital functions to support older adults in the disaster setting. Specifically, I identify how senior-serving organizations’ relationships with older residents, the connections between and among agencies, and their ability to tailor disaster support services to older people’s needs supported elders across Boulder County during and after the 2013 floods. I then discuss variation in the ways that elders accessed organizational social capital in smaller communities that offered fewer age-specific services.

A primary goal of this dissertation is to feature older adults’ narratives, as their voices are underrepresented in the disaster literature concerning their experiences. However, I believe it is also important to situate their perspectives within a broader social setting, which includes the organizations that serve this population. In addition to spurring growth in gerontology as an academic field, increases in longevity have fostered the advancement of aging-focused agencies in the past several decades, producing an upsurge in senior-focused services (Peterson and
The entities engaged in providing aging services typically are embedded within various multi-organizational networks. Perspectives from new institutional theory help to explain why exploring these networks is important for my analysis of social capital within senior-serving organizations. A combination of coercive (political pressures), mimetic (habitual or modeling behavior driven by uncertainty), and normative (education and professionalization) forces push organizations within a shared “field,” or a “recognized area of institutional life,” to conform to a common set of ideas, practices, and internal structures. Institutions become isomorphic as a result of these interactive processes (DiMaggio and Powell 1983: 148). The activities of organizations such as those discussed here are not determined independently within the organization itself, but within larger institutional contexts (Scott 2001; Powell and Colyvas 2007). These institutional norms and structures set the “rules of the game” that determine the flow of resources among organizations (Lin 2001). Organizational social capital is therefore shaped by the nature of relations among organizations within larger “organizational ecologies” (Tierney 2014: 44).

Social Capital in Emergency Response

Disaster researchers and practitioners have long recognized the importance of enduring connections among organizations for efficient and effective disaster response, as exemplified by the old adage that the scene of a disaster is “no place to exchange business cards.” Kapucu and Garayev (2012) argue that in order for emergency response networks to be effective, organizations must make pre-disaster investments in building sustainable trust relationships and
enduring collaborations. Established networks connecting organizations under routine conditions facilitate coordination and encourage the flow of information across agencies during extreme events (McEntire 2002; Kapucu 2005). These pre-existing partnerships can also enhance organizations’ adaptive capacity, enabling them to more rapidly rebound and limit the disruption of essential services. As an example, Norris et al. (2008: 143) observe that studies covering mental health system responses to disasters have “repeatedly revealed that developing organizational networks, coalitions, and cooperative agreements ahead of time is crucial…[and that] program directors relied upon pre-existing relationships perhaps more than any other single resource to implement programs quickly.” Alternatively, the absence of linkages among social service provider organizations and disaster service networks can be particularly detrimental to vulnerable populations that are more likely to depend on their support (Zakour and Harrell 2003).

Many studies of organizational coordination in disasters do not directly incorporate or even reference social capital; yet their findings nonetheless highlight a key premise behind social capital theory: that resources embedded in social networks “enhance the outcomes of actions” (Lin 2001: 19). Studies detailing how organizations utilize their networks during disasters demonstrate that connections between agencies serve as pipelines for information, which indirectly facilitates the acquisition of resources, as well as for obtaining direct access to resources themselves. Activating these networks enhances agencies’ capacity to meet clients’ needs within disaster-affected communities, either through service provision or distribution of

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15 This is not to diminish the role of emergent groups. On the contrary, Quarantelli and Dynes (1977:31) note that “disaster situations tend to be peopled by emergent groups, entities that had no existence prior to the crisis; these often have only transitory existence, but their functioning may be crucial to the whole trans- and post-disaster response.” However, lack of coordination between formal organizations in particular has consistently been cited as a hindrance to the effectiveness of official disaster response activities.
resources. In the same vein, senior-serving organizations\textsuperscript{16} in particular can play a key role in addressing older adults’ needs in the context of disaster.

The literature on organizational social capital in the context of disaster primarily centers on emergency management agencies and community-based service organizations (Kapucu 2005; Robinson, Berrett, and Stone 2006; Zakour 2008; Varda 2009; Doerfel, Lai, and Chewning 2010; Meyer 2013; Miao, Banister, and Tang 2013; Kapucu and Hu 2014). This chapter expands that body of scholarship by shifting the focus to organizations that serve seniors. To my knowledge, no prior disaster research has examined social capital within SSOs, particularly in relation to community-dwelling older adults. Yet there are important reasons to pay attention to such entities. As noted by Aldrich and Meyer (2014: 260), “ties to social organizations provide both connection to an organization that can provide support through institutional channels (e.g., like a church collecting money for a family in need) and potential informational ties to individuals who may not be accessible through bonding social capital (e.g., friendships developing between church members from different socioeconomic backgrounds).” Likewise, SSOs routinely connect seniors to services and resources that support their independence. The durable relationships that these organizations maintain with this population and among one another place them in a good position to attend to seniors’ disaster-related needs (Fernandez et al. 2003). Below I elaborate on themes from my analysis that highlight ways in which SSOs leverage their social capital to support older adults in disaster settings. These factors include trust relationships

\textsuperscript{16} In the interest of brevity, I shorten the phrase “senior-serving organization” to SSO in subsequent discussions. I define these entities as organizations that are specifically designed to address the needs of older adults or that maintain programming that targets seniors as a large proportion of their base. SSOs represented in my data include housing programs, senior centers, aging services organizations, special needs programs, and nonprofit organizations.
with seniors, established partnerships among service provider organizations, and the ability to tailor services to address age-specific needs.

**SSOs as Gateways to Disaster Services**

My data suggest that for a number of reasons, SSOs can improve outcomes among seniors when disasters strike. These agencies serve as bridges that can connect seniors to relief funds, volunteer labor, and other forms of assistance. Below I discuss four mechanisms that trigger the flow of social capital through organizational networks to seniors in the post-disaster environment. First, trust and familiarity position these organizations and their representatives as safe, reliable actors in the eyes of many elders and those reaching out on their behalf. Second, the nature of SSO representatives’ work often requires intimate knowledge of clients’ lives and lends itself to a more holistic understanding of their needs. Third, inter-organizational partnerships and networks among SSOs amplify the amount of social capital that can be leveraged to widen seniors’ access to information and other resources. Finally, SSOs’ population-specific expertise is a valuable asset that emergency management and disaster recovery personnel can draw upon to better serve older adults in the course of their disaster-related activities.

*“We Were a Safe Place for Them”: SSO Visibility in the Aftermath of Disasters*

Representatives from four of the SSOs in Boulder County stated that community elders sought them out as trusted sources of information and support for flood-related needs, despite the fact that emergency management was not part of their routine activities.17 These individuals stated that their agency’s reputation, accessibility, or even simply designation as a place focused

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17 Two of the agencies had been identified by officials as points of contact involved in emergency response. Others became more formally involved in community flood relief activities over time as human services needs arose after the disaster.
on seniors led many to inquire with them for help with managing disaster impacts. SSOs were in some respects more accessible than Disaster Assistance Centers (DACs).\textsuperscript{18} For example, Janet, a senior services specialist in Boulder, observed that despite community-wide advisories to visit the Boulder DAC for flood-related needs, dozens of seniors contacted her agency directly to inquire about available assistance:

\textit{People were calling [organization name], not necessarily if they had an emergency situation, but just to kind of see if there were some resources that they could draw on because maybe they had a little something that had happened to them or a neighbor...this was a place they felt comfortable asking.}

This organization had not been identified as a point of contact for flood response, she explained, but some older residents were hesitant to engage the formal disaster relief system and simply felt more comfortable reaching out to an agency with which they interacted on a regular basis.

While representatives of Janet’s organization did have a physical presence at the official Disaster Assistance Center (DAC) to assist older flood survivors, she stated that many seniors who called had not visited the center and thus were unaware of the organization’s presence there. Challenges related to transportation shed further light on why this may have been the case. First, the Front Range region was inundated with vehicle insurance claims during this time, as many residents lost their personal vehicles in the disaster (Vigil 2013). Second, access to transportation within the older population was a known problem prior to the floods, and continued to be a theme in my interview data about barriers that hindered access to resources afterward. Thus,

\textsuperscript{18} A Boulder County flood resources website archived on September 21, 2013, ten days after the onset of major flooding, stated that the Disaster Assistance Centers offered no phone service due to their temporary nature, and that individuals who had questions or needed help were encouraged to visit in person to find information (Boulder County 2013). Only one nonprofit SSO was listed at that time.
SSOs’ accessibility by phone likely reinforced their position as convenient alternatives to the DACs.

In other instances, people reached out to SSOs to ask them to check on older relatives or neighbors who had sustained flood damage and were in need of assistance. Kamila, a county nonprofit SSO representative, recalled that shortly after the flood, her organization received a number of such calls:

*People were reaching out to us to take care of seniors in the community [after the flood]. Sometimes they were children who lived out of state and didn’t quite buy mom’s responses that everything was okay—and sometimes it wasn’t okay, sometimes we send a volunteer out to go check and the home was just devastated. Mom couldn’t get down into the basement to check and didn’t know that the whole basement had flooded; things had been soaked and ruined. A lot of people would call on their neighbors who were not reaching out or who were not expressing the need for help.*

Due to their status as agencies that were specifically oriented toward this population’s needs, SSOs stood out to those hoping to obtain assistance on their behalf as an alternative to traditional disaster assistance agencies. Although a handful of government organizations had been pre-identified as part of an Emergency Support Function (ESF) for sheltering and mass care, other SSOs became drawn in over time as the need for their specialized expertise became more apparent.

“Maximizing Those Personal Connections:” Client Relationships in Disaster Settings

My interview data suggest that SSO representatives often relied on personal rapport and familiarity to create trust with clients. This foundation of trust enhanced their ability to identify and address clients’ particular needs and sometimes blurred the distinction between formal and informal support. To illustrate, Lucille, an 81-year-old flood survivor who had been displaced
from her home of more than 30 years and forced to relocate from Lyons to Longmont, described the evolution of her friendship with John, an aging services employee:

*He was our senior advisor in Lyons and he’s just a friend now, he just comes by once a week to see how [my husband]’s doing, and be sure that I’m holding up. ‘Cause he became a really good friend. I mean he doesn’t do anything as far as the part of it where he was our senior advisor, he’s not anymore.*

Although Lucille’s case was no longer within John’s jurisdiction, he continued to assist her with finding resources, connecting her to information about services, and providing a source of badly-needed social contact and companionship. They had developed an informal, personal bond that remained despite the termination of his professional responsibility. John knew that Lucille had lost many of her social connections due to the flood and was feeling isolated in her new environment, so he routinely visited to spend time with her and ensure her wellbeing.

Although John and Lucille’s case is in many ways exceptional, other service providers described their relationships with clients as having a similar blend of formal and informal characteristics due to the depth of their knowledge about these individuals’ lives. Describing a recent communication with one of her clients, Gloria, an SSO worker with the City of Longmont, shared:

*I just saw one of our seniors came in last week and I said, "[client’s name], you got a new house!" She goes, "Yeah, I got a new house." I said, "How do you like it?" She goes, "I like it." She goes, "I have a big kitchen." I said, "You do?" She said, "Yeah." I know she has a lot of grown children. I said, "Are those kids expecting you to cook for them now because you got a big new kitchen?" She goes, "Yeah," and she says, "You have to come by and see it." I say, "Okay. I'll go by and see it." [the client says] "Call me so we can have coffee ready for you." I'm like, "Okay. I'll do that." She's got a new home. It'll probably last her until the end of her life. The home that she had [which had been damaged by the flood] had mold, it had all sorts of your own makeshift attachments to it because a lot of folks in mobile home parks sometimes create their own little additional space or storage and things like that.
As part of her professional responsibility to adequately understand the client’s background, personal circumstances, and needs, Gloria had to learn intimate details about the client’s life. That knowledge influenced their rapport, creating an amicable connection that led the client to feel comfortable inviting Gloria into her new home for a casual visit. Other service providers similarly emphasized the importance of taking the time to develop an in-depth knowledge of seniors’ lives to build trust. These hybrid relationships created a comfortable space for seniors to open up and discuss their needs, in turn enhancing practitioners’ ability to connect them to appropriate resources.

Of course, it is not possible or even feasible to expect that all client-practitioner relationships will be as intimate as those described above. For example, after discussing her closeness with John, Lucille went on to describe the differences that she felt existed in the dynamic between senior services employees and clients in her new community:

…the one thing with the senior center here, they just have so many seniors to take care of, they can’t do the personal on-hands like [John] could. Because he had a smaller group of people in Lyons to deal with so, he was more hands-on than they are here. So, that’s the way it goes.

Yet despite the fact that SSO employees cannot generally create bonding relationships with all of their clients, they may nonetheless have the greatest depth of knowledge about and contact with seniors outside of those individuals’ kin and friend networks—particularly among those who are socially isolated. That close familiarity with clients’ needs, even if not based on a mutual bond, can place practitioners in the best position to advocate for them when disasters disrupt their lives. Maria, a service provider in Longmont, shared one such story about a client whom her organization had been helping to age in place before the flood, and continued to track following her displacement:
She was living alone and we were helping her stay at home—the Senior Center, amongst other places, with safety nets. Meals on Wheels was delivering to her and she was right by the river, her house got hit also. She had a great home. She was immaculate. She was a minimalist...but she was starting to have memory loss. A lot of cognitive deficiencies and she had challenges, for sure, but we had the money management program helping her, making sure all of her bills were getting paid and reading through her junk mail. And we had Meals on Wheels coming in, and we had a friendly visitor coming to see her once a week, making sure she was okay. And then she had a son that didn't live too far from her in another mobile home. [After she had been displaced by the flood] when I went to go visit her, it was such a drastic change for her because he was a collector of things as opposed to where she was, like, a minimalist. So, for somebody that's already having some dementia, you know you want to keep them in a place where it’s what they're used to and some of those routines to keep in place.

When she was displaced and she had to move in with her son, she just had this little tiny area. She was sleeping on a sofa bed because her son had stuff in all the rooms. I couldn’t even get—I mean it was a safe place in terms of they were able to get out safely through the front door, through the back door and to the bathroom, but the bedrooms were so over stuffed with things that she couldn't even sleep in a bed. She only had this little area where she can sleep and that was totally not what she was used to. That story is really sad because eventually Adult Protection got involved...just because we wanted her to be in a safe environment. And just because we knew how hard that was for her to be in this place where it’s not her home, it’s not what she’s used to. And that was a sad story. Eventually, I think they wanted to put her in assisted living. I’m not sure what the end result was. But Meals on Wheels was involved, we were all concerned... They were going there every day and taking out at least a hot meal. Because I don’t even know, I went into that person's kitchen. I've seen a lot, and that one wasn’t as bad as others I've seen, but it was just—there's only certain areas you can go into...She couldn't cook for herself. Anyway, that was one of a few sad stories that we've had to experience because of the flood, and she was right by the river. She absolutely couldn’t stay. I think they went in there in the middle of the night and got her out.

Although Maria did not maintain a close, off-the-clock relationship with this client, she had detailed knowledge about the woman’s life and needs. She did not need a bonding connection to recognize how the client’s new living conditions were compromising her physical and mental health, or to take action on the woman’s behalf. While the capacity in which Maria intervened was a part of her formal duties as a service provider, her knowledge about the client’s circumstances and needs ran much deeper than would be possible for agency representatives outside of this network, particularly disaster relief practitioners. Further, Maria’s story illustrates how essential her network of social safety net organizations was both before and after the
disaster for providing this client with the resources necessary to maintain her independence, a theme that I cover in greater detail in the following section.

The trust that characterizes SSO-client relationships differs from what is often described in social capital research in a few respects, and thus requires some discussion. First, rather than drawing on clients’ generalized sense of trust in institutions, SSOs identify as experts on seniors’ specific needs, further distinguishing themselves from other agencies and reinforcing a particularized form of trust (Patulny and Svendsen 2007). Returning to Nan Lin’s (2001) critique of scholars’ imprecise definitions of social capital and the associated measurement issues, here I define trust as an asset that facilitates access to socially embedded resources. This is a departure from lines of scholarship that subsume the concept of trust under definitions of social capital. For example, MacGillivray and Walker (2000: 203) characterize generalized trust as a facet of “formal social capital,” and particularized trust as “informal social capital.” These distinctions notwithstanding, the kinds of trust engendered by SSOs relies upon their distinctive organizational characteristics rather than more abstract trust in social institutions or systems.

Second, this trust is mostly unidirectional. That is, service providers need not invest the same degree of trust in their clients as the clients must invest in them by sharing sensitive information and relying upon them for support. Nevertheless, the condition of trust enhances clients’ access to social capital that they can use to enhance the effectiveness of their actions. In the context of flood recovery, this took the form of help with managing or strengthening applications for financial assistance, access to volunteer labor to repair flood damage, and use of service provider networks to locate and finance replacement housing. In each of these examples, SSO clients were able to enhance their own efforts by accessing valuable information, utilizing expert knowledge, or offsetting direct costs.
SSOs often engage in ongoing collaborations with other organizations to serve clients more effectively under routine conditions. Scholars have found that partnerships between service provider organizations help to establish trust between organizational representatives, which in turn strengthens inter-organizational collaboration (Provan et al. 2005; Kapucu and Demiroz 2014). My data suggest that these networks can be leveraged to provide similar support to seniors following extreme events. Nearly all of the SSO employees I interviewed indicated that they regularly collaborated with colleagues from other organizations to help meet their clients’ needs, both with respect to flood impacts and under non-emergency conditions. Although many representatives made new contacts as emergent groups formed to coordinate disaster relief and recovery efforts, most relied heavily on established service provider networks and staff of other organizations with whom they interacted on a regular basis. This practice was consistent with the literature on interagency collaboration in disaster settings, which suggests that organizational response is most effective when based on pre-disaster interaction and partnership (Kapucu 2007; Varda et al. 2009; Kapucu, Arslan, and Demiroz 2010).

Representatives of SSOs represented in my dataset observed that connections among them proved particularly important in the early stages of the disaster. Laurel, an affordable housing specialist in Longmont, explained why her existing professional network had been so critical in this regard:

We have a pretty tight network of service providers and nonprofit agencies and we just said, "Wait lists are frozen, I'm prioritizing flood impacted. Let me know who you've got. We'll get them in as soon as we can." And we just took people as they came in...It's really hard to create anything new. After a disaster hits, it's like you go back to what's known. You fall back on what

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19 Interviewees primarily referenced specific individuals within organizational networks with whom they interacted on a regular basis.
you've got or what you've known. It's not like, "Oh, let's start an organization. Build new relationships." You fall back on what you've got already, so it really relies on the social infrastructure that is already there, I think.

During the emergency phase when needs were acute, there was little time to search for new resources or services. Knowing which organizations could meet various needs and which individuals within those agencies could be relied upon in a pinch was essential as SSO representatives scrambled to respond to flood impacts and assist displaced residents. This was especially true of the three cases I was able to identify in which SSO sites were damaged, forcing these organizations to relocate while also fielding inquiries from flood-affected seniors.

Resuming services quickly meant relying on established partners and other organizational connections to find space and set up operations.

Moving beyond the immediate disaster response phase, SSO representatives continued to rely on their networks to assess seniors’ needs and help them navigate the disaster assistance process. In Longmont, SSOs and other city departments drew on a longstanding tradition of coordinating around outreach to residents and working together to solve problems that crossed departmental jurisdictions. Maria’s comments illustrate what these collaborations looked like as the city reached out to ensure that seniors received assistance with short-term recovery needs within flood-affected neighborhoods:

There was a gentleman that was under the radar in terms of—I say collectors, but he was a hoarder and they couldn't get him out of his home, and he ended up being a senior but he refused to work with anybody [from aging services]. He didn't want to work with us. But [another department] had to work with him because [my colleague] was out there...trying to get people out of there because a lot of that stuff was moldy, he couldn't live there... She helped a lot of people. She was knocking at doors with FEMA and saying, "This is what you need to do." So she saw some of those people that I didn't see. Mostly, I had families and I went to their homes, but not to the places that were completely devastated... [colleague in another city agency] was more in the trenches and she saw a lot more than I did when it came to that. She actually would send me people so I could help them navigate through resources. It was a lot of tag-teaming with a lot of agencies... It was a lot of collaboration. We do that anyway, but even during the flood, it was
just trying to make sure people were where they needed to be... And I can't talk for other places [outside of the senior services network], but I hear a lot of that from other people in other places it seemed like we were—that our collaboration efforts are more tight here because we work with so many people.

Interagency partnerships such as these enabled city departments to be nimble and address residents’ needs in ways that made sense for each unique situation. In the case above, this meant having another department respond to an older flood survivor’s needs due to his refusal to engage with aging services. In this instance and others, members of the city’s service provider network collaborated with one another behind the scenes to ensure that the appropriate parties reached out to seniors with the resources they needed.

Proactive efforts such as these were particularly important in light of SSO representatives’ observations that many seniors were reluctant to inquire about flood assistance. Reflecting on how to address this challenge, Janet emphasized the importance of relationships with other service providers outside her organization to identify seniors in need and work around their reluctance to independently request support:

*I guess kind of maximizing those personal connections. Meals on Wheels was creative about that. How they deliver meals to people. They would come to us and let us know if they felt like, "Hey, this person looks like they might need some help." And that's how we found some of these people [that needed assistance].*

In some cases, representatives explained, clients felt that applying for disaster assistance meant taking resources away from others who needed them more. In other instances, they were simply overwhelmed at the prospect of interacting with complex bureaucratic disaster relief systems and avoided dealing with their losses altogether as a result. The literature on seniors’ utilization of disaster assistance suggests that some may have been reluctant to seek assistance due to stigma or fear of dependency (Poulshock and Cohen 1975; Bell, Kara, and Batterson 1978; Huerta and Horton 1978; Ngo 2001; Peek 2013). Regardless of the reasons behind seniors’ inaction,
however, SSOs relied on inter-organizational connections to alert one another to new cases and assist each other with outreach. Network members trusted in one another’s support and recognized a shared interest in the clients’ wellbeing.

“*We Have Our Community Experts*”: SSO Expertise in the Disaster Setting

As evidenced by several of the preceding examples, my data indicate that SSOs are well positioned to understand seniors’ disaster-related challenges and provide appropriate assistance in addressing them. Familiarity with these matters is often lacking within disaster response organizations, which are oriented toward broader overarching issues. Speaking with individuals in emergency management and disaster recovery roles enabled me to identify the ways in which these organizations depended on SSO representatives’ expertise. For instance, Jonah, an emergency management official in Longmont, described how a pre-existing partnership with the city’s senior center enabled him to address shortcomings in his staff’s understanding of how to accommodate older adults in shelter conditions and trust that their needs would be met:

*Once we got [older evacuees] to a shelter, we were under-prepared for especially the medical part of the—more the frailty aspect. We weren't prepared for that level of support. There wasn't necessarily a hospital thing, but we should have been, I think, better able to—in more of a comfort sort of setting. The shelters that we had weren’t able to support an 80-year-old person who really needs the ability to not lay down in a really hard cot at night I think we overestimated our ability to support that. Luckily, our sheltering complex is the Memorial Building which is basically a rec center, but it’s also right next to the senior center. So we have our community experts who—you know, the woman who runs the senior center is heavily involved in our sheltering team. So she was able to very quickly do what she needed to do. But I think also through that process was able to educate us on, here’s all the things we need to be better for next time.*

Emergency operations personnel in both Longmont and Boulder relied on those communities’ senior centers to anticipate and meet older evacuees’ needs in emergency shelters, either by using their own buildings as special needs shelter sites or by staffing shelters elsewhere.
These individuals attended to the most vulnerable older evacuees through a range of activities. For instance, they ensured accommodation of medical equipment, worked through memory blocks with those with cognitive impairments, and secured funding to replace medications and other health supportive supplies that were not easily financed with disaster relief allowances. In an effort to capitalize on the public attention that the floods had created, senior-focused non-profit organizations initiated programs to educate clients about disaster preparedness. They sent volunteers to help clients create emergency kits according to their particular needs and distribute supplies to seniors throughout the area.

Beyond taking charge of preparedness needs and shelter accommodations, members of SSO networks tailored disaster assistance services to address factors that could encumber older residents in their attempts to access resources and repair flood damage. This involved walking through online assistance applications with seniors who were not computer literate, prioritizing volunteer cleanup activities for those with physical limitations, and coordinating with emergency management personnel to reduce opportunities for scams and contractor fraud. SSO workers expanded their routine functions to sustain these activities during and even beyond the nine months it took for a federally funded flood recovery case management system to become fully functional. Relationships with SSOs provided crucial support to emergency service providers who were unfamiliar with seniors’ needs or the resources available for addressing them.

However, access to senior services was not uniform across communities. Towns with fewer institutions developed alternative strategies for accessing organizational resources. Below I describe variation in older adults’ access to SSOs across the four study communities. I then focus in on Lyons and Jamestown to describe the ways in which seniors in these areas utilized service providers and organizational networks.
SSO Resources Across Boulder County

Considering the differences in size and economic conditions across the four communities included in this study, one could reasonably predict that senior services offerings within each would be similarly varied, and indeed there are significant differences in service provision. Boulder and Longmont, with their large populations and economies in comparison to Jamestown and Lyons, house the largest number of senior services. The City of Boulder’s budget for senior services in 2014 was the largest of the four communities at $1,054,724.\(^\text{20}\) The City of Longmont budgeted $679,145\(^\text{21}\) for senior services in the same year, bringing it into second place for expenditures earmarked for seniors. A nearly six-fold increase in the Town of Lyons’s total operating budget ($30,465,207, up from $5,658,344 the prior year) due to flood assistance increased senior services expenditures to $5,000 (up from about $3,300 in 2013). In comparison, the Town of Jamestown’s total operating budget for 2014 was $9,072,000 (up from a projected $1,480,500 due to flood recovery funds). Owing to its limited number of localized services, this budget contained no funds earmarked for older adult programming. Boulder County spent about $820,000 on aging services in 2014. See Table X for a quick overview of these figures.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Boulder</th>
<th>Longmont</th>
<th>Lyons</th>
<th>Jamestown</th>
<th>Boulder County</th>
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<td>Senior Services Budget</td>
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</tbody>
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Table 2 Spending on Senior Services

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\(^{20}\) I include the 2014 budget here to account for the injection of funds into each community in the aftermath of the floods.

\(^{21}\) A broader array of city departments coordinated around services for seniors in Longmont compared to Boulder; thus, total expenditures on this population are not reflected in this figure.
Most aging services offered by the County were available to all residents, and staff from some programs traveled to less populated areas to make them more accessible. The majority of other SSOs, however, were located within cities and covered limited service areas. For example, at the time of this writing, two of the area’s largest special needs transportation programs serve Boulder, Longmont, and Lyons, but not Jamestown. Similarly, nonprofit organizations often struggle to secure enough volunteers to service smaller, more remote communities such as those in unincorporated Boulder County. Due to these and other factors, seniors’ organizational support networks took a different form in Lyons and Jamestown compared to the cities. I describe these differences in greater detail below.

**SSOs and Organizational Social Capital in Lyons**

As stated above, Lyons was unable to offer extensive senior services before the floods. The town had a modest senior center that hosted programming for older residents, such as affordable meals (delivered from Longmont by local volunteers), classes, and social activities. Older persons were also able to access limited transportation assistance through regional nonprofit services. However, the town primarily relied upon external organizations for assistance with senior services. Given the small size of this community—Lyons’s town government consisted of about 15 people at the time of the floods—collaboration with these external agencies was essential. Before the flood, town administrators had been oriented toward regulatory and planning functions, and for the most part lacked the expertise to undertake highly specialized tasks. In the aftermath of the floods, existing relationships with outside aging services agencies, as well as emergent partnerships between local and regional nonprofit groups, provided important bridges to organizational networks. I briefly describe the expansion of these linkages below.
When the floods struck, the town’s water system was severely damaged, leading to a near-total evacuation order that required even residents whose homes were not flooded to temporarily relocate. It took six weeks to even begin bringing utilities back online so that those whose residences were habitable could return home (Sybrandy 2013). Due to the prolonged mandatory evacuation, town officials tracked down and contacted known residents to help them register with FEMA for funds that would offset the cost of displacement in the short term.

Gretchen, a former town official, described how the town approached this process:

> When everyone dispersed, it was like “how do you keep track of everyone?”... some people had met their neighbors for the first time. So, there was no good way of doing that and we had lost two of the three mobile home parks, so we knew there are people who maybe didn’t have enough resources to fall back on immediately. People were scrambling just on where to live, where to sleep... So our effort— this happened maybe a week, a two or three—is we set up a group that would work on individual assistance while town staff worked on infrastructures...So, someone from the county social services was a Lyons resident, [name redacted]. We had volunteers that had either social work or— something drew them to that, where they felt they could help in that... All of them were residents, actually... We had the Lyons Community Foundation there at the table, we had the [Boulder County] Council on Aging, like, "Okay, where did everyone go? How do I figure this out?"

...we wanted to make sure everyone had a FEMA number... It had to be really like anti-government or trying to stay off the radar screen for other reasons [to not have been registered], but I think we had one of the highest coverage of FEMA registration, probably of any flood-affected areas, I would say. I’ve heard that at the state level, [people were wondering] “How did that happen?” Well, it’s a door-to-door effort, and it was knowing people. There were no paid staff doing this, it was just volunteers and myself. I went down to [Boulder County] and begged for 20% of [a resident who worked for a county department’s] time to work in Lyons and they gave me that, and that kind of thing.

Despite limited human capital, the town was able to draw on social capital to undertake an impressive outreach effort. During the flood, tracking down residents and ensuring their safety was an effort that had been largely undertaken by residents on each “island.” In the aftermath,

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22 About 20% of the town’s housing stock was damaged or destroyed (Lyons Emergency Assistance Fund 2014).
23 During the disaster, the town was divided into six elevated areas that were cut off from one another by floodwaters.
officials activated bridging and linking ties to obtain assistance from established connections and volunteers to expand its functional capacity.

These activities began with social media outreach. However, the individuals involved in the tracking effort recognized that a segment of the population, particularly some older people, would be difficult to reach through convenient online outlets. To address this challenge, the team developed a mixed-media outreach strategy to ensure that all residents received assistance.

Annalise, a flood recovery coordinator working in Lyons, described how local officials devised this approach:

*How do you reach older adults? Because they are not hooked in with technology. That’s another big challenge. It was a big challenge, but we overcame it. When we started doing outreach in Lyons, we did it by foot, we did it through mail, and we did it through social media. And we felt like we had really good coverage. We were able through those three means to identify the two people out of the entire town of Lyons that didn’t register with FEMA. Now, it took a team of us to do it, to sit down with the town map, to identify all the damaged homes—which that’s not that hard to do when you’re looking at the map with the river—and then take the FEMA list and just start crossing off every person that registered with every address. And we were successful, and then some of them are renters not owners, so we crossed it with the voter registration because renters registered to vote, so that the voter registration—now we had to do it by hand, but it was a small enough community we were able to do that.*

However, even with volunteer assistance, town administrators had few resources and little expertise to dedicate toward addressing seniors’ ongoing needs, especially given the magnitude of destruction. Ensuring that older residents were able to access assistance over the long term required that the local government take advantage of relationships with SSOs and other service-provider organizations. For instance, the town leaned heavily on county-level aging services representatives to help with managing financial assistance programs and case management for seniors. Annalise went on to discuss how these connections helped her find assistance for older flood survivors in ways that she could not due to her lack of familiarity with resources for this population:
When I had any kind of issue with a senior, I just picked up the phone and called [aging services representative]. I'm like, "[contact name], can you reach out to this person?" "Absolutely," and he did it like that. It really worked well for me because having not come from the aging services area, I didn't know what those resources were, but I knew [contact name] would know, and he would figure it out. Same with [mountain community services representative]... It was awesome to know all I had to do was make one phone call and I knew that that senior was going to be taken care of. And 60 plus, that's all I had to know. Like, "Are you 60 plus? Okay, talk to [county SSO representative]." That made a big difference for me.

Town staff also coordinated with SSOs in Longmont to resume social activities and initiate assistance programs for the community’s elders. For example, weekly lunch gatherings at the senior center had served as an important opportunity for social engagement for many seniors before the flood. Officials worked with a nonprofit meal delivery organization to resume these luncheons in town. Additionally, in an effort to reduce the emotional burden displaced elders were facing due to the loss of their social network, agency partners collaborated to set up special gatherings in Longmont that provided opportunities for social engagement. Similarly, local community organizations forged new partnerships with area nonprofit groups to extend the reach of existing services that simply could not be created from scratch locally to serve such a small population. Although these initiatives were not generally reserved for seniors, programs supporting basic needs and other human services were invaluable to elders on fixed incomes or who otherwise needed more specialized assistance.

SSOs and Organizational Social Capital in Jamestown

At the time of the floods, Jamestown maintained an even smaller government than Lyons, with only two paid town employees and seven volunteer administrators. There was no access to special needs transportation or meal delivery programs, no senior center, and no local aging
services agency. With a population of less than 300 residents, there were simply too few seniors to maintain such programming. Although the town provided no specialized senior services, there was little expectation of such offerings, as mountain communities had long tended toward self-sufficiency and insularity.

Self-reliance and autonomy were key values ingrained in mountain culture, and Jamestown was no exception to the “mountain strong” way of thinking. In fact, these exact concepts were codified in the town’s articulation of nine guiding principles following the floods. In this document, a statement on “Autonomy, Self-Governance, and Self-Reliance” is preceded only by statements on “Character of Community/Sense of Place,” “Diverse Social and Economic Structure,” and “Arts and Culture” (Town of Jamestown N.D.). Mountain dwellers’ emphasis on these values also shaped their views on the aging process itself. For example, 63-year-old Mara, a mountain resident outside of Jamestown, described the values that informed her approach to aging:

It's also a very different population [in the mountains]. Again, it's that distinction that [emergency management official] was making of the self-selecting. The people up here who are 60 and above, most—people don't move here when they're 60 years old. Most of those who live here who are 60 and over have lived here for a long time. We've kind of grown into our senior years in an environment that—you know, I ask for more help now. If I have something really heavy to lift, I don't try to lift it by myself anymore [chuckles]. Because the last time I did that, it did not work out well, so I tend to be— I do a lot for other people. And if there is four of us lifting something that's 150 pounds, I'll be one of those four, because I can do that, but I'm not going to try to take on 150 pounds by myself anymore. I tried and it didn't work. Like I said, it ended badly, so I do actually, sometimes learn from my mistakes. But it is. If you've been hauling wood and chopping wood for 25 years, you get efficient at it.

Boulder County aging services had taken a progressive approach toward serving mountain communities, assigning a representative to work specifically with mountain elders even prior to the floods. However, these services were not based in Jamestown.

24 Boulder County aging services had taken a progressive approach toward serving mountain communities, assigning a representative to work specifically with mountain elders even prior to the floods. However, these services were not based in Jamestown.
To residents like Mara, aging in the mountains meant striking a balance between self-sufficiency and management of personal limitations. Comments shared by Kay, a Jamestown resident in her 60s\textsuperscript{25}, provided further insights into how town residents thought about their age as an identifying characteristic:

\textit{We really don't have a lot of people that are over, say 75 or so. We have a lot of people in the 50 to 65, 70 range. Maybe when you went to those [aging in community] meetings you probably saw that most of us are pretty healthy [chuckles]. We're out doing, walking, biking, doing all kinds of things. But there are certainly a few that are not able to do that kind of thing. It's like we're trying to prepare for it. But I don't think a lot of us are just there yet, which is kind of a strange— it seems strange to me to go to those [community aging] meetings, because I don't consider myself aging at this point. I just consider myself taking each day as it comes and living. I don't consider myself aging. One thing that I'm wondering— and I hope doesn't happen—is I wouldn't want the group going to those meetings to think of themselves as iso— not isolated, but in a different category than the rest of the town. I'm for intergenerational, you know, "Let's come together as a town and solve these problems." Not put ourselves in a category. I hate the category of seniors, to tell you the truth. It's great to get discounted movie tickets and [chuckles] all that, but I just do not like the idea of categorizing people into a senior group, because I don't think of myself as a senior. I just think of myself as a person who's living and dealing with issues, whether they're health or whatever, dealing with age-related issues as they come along. But I'm not going to put myself into that category of senior and start thinking that way. And that's what bothers me a little bit about the aging in place movement, so to speak. I'm just wondering if it could become more intergenerational, because it's not a senior issue. It's a town issue.}

As Kay suggested, the majority of Jamestown’s elders fell within the 65-74-year-old range, with those aged 60-64 representing a close second. There were only a handful of individuals aged 75 years or older (United States Census Bureau 2014). Despite the relative overrepresentation of young seniors, all residents aged 60 years or older would have qualified for senior services at the time of the floods. However, while most of the Jamestown elders I interviewed had utilized some type of disaster assistance, they leaned primarily on their community and personal networks—not age-specific services—to access it. These individuals

\textsuperscript{25} Due to the small size of the town, providing interviewees’ exact numerical age could compromise their anonymity. I use general age categories for all Jamestown residents to avoid inadvertently identifying research participants.
sought far less flood support from SSOs compared to residents in the other three communities. None of my older interviewees had utilized aging services, although stakeholders referenced a handful of residents as having obtained assistance from county aging services. Four interviewees had sought support from nonprofit organizations that served seniors as part of their outreach to vulnerable populations; however, none of these organizations solely targeted the aged. Understanding the context for these choices requires some explanation of the whole community’s responses during and after the floods, which I describe briefly below.

Knowledge that residents would not necessarily be able to depend on outsiders for assistance was a key motivation behind the community’s approach to disaster preparedness and response prior to the floods. For example, Liz, a mountain community leader, described a conversation between a mountain emergency planning group and county disaster management personnel after a 2010 wildfire:

*We've been working really closely with the Office of Emergency Management. [name redacted], told us at an [InterMountain Alliance] meeting, after the fire, that if there was a flood, if there was a rain event of this proportion, whatever that is, "We won't be able to get to you, you're on your own." So he told all the community leaders from across the area that, in that meeting. That's pretty awesome information to have. It's like, "Okay. Shit. If something happens, we're on our own." Because if you know that info, then you can plan for that.*

Recognizing the likelihood of this scenario, community leaders in Jamestown took responsibility for the response to the 2013 disaster and played an active role from its earliest stages. For example, immediately following the mudslide that killed the town’s patriarch and triggered local emergency response activities, the town’s mayor was involved in initiating safety protocols and organizing residents. She alerted first responders to activate the town’s emergency notification system, made announcements on foot with a bullhorn when warning sirens failed, and traveled door-to-door to ensure that people evacuated from the most dangerous areas near floodways
Likewise, residents’ accounts reflected few distinctions between the actions of local officials and those of other community members even in the earliest stages of the disaster, as many of them had also participated in notification and sheltering activities. Due to road closures the Jamestown Volunteer Fire Department was the only formal organization physically active in the area until the town was evacuated, leaving locals to fend for themselves for two to three days.

In the absence of other organizational response, community members made do with the supplies they had on hand and developed solutions as problems arose. For example, after the town was bifurcated by raging flood waters, residents devised a zip line system for getting needed medications and other supplies from across town to residents on the opposite side. Residents organized supplies and kept a record of where items were located. Able-bodied community members assisted mobility-limited seniors from their homes and built the plank bridge needed to access the helicopter evacuation point (Schoedinger 2013). Rather than age, the division of labor during this period centered around skills, resources, and abilities. Again, these efforts relied on mutual support and collective action within the community.

Following their evacuation, residents were directed to Disaster Assistance Centers where they applied for individual assistance through FEMA. The majority of Jamestown residents I interviewed who had evacuated reported struggling with the disaster assistance process at some point. Frank, who was in his 70s and still had outstanding expenses and claims, described the most recent iteration of his ongoing challenges with obtaining financial assistance after having exhausted most of his savings:

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26 See the description of the town’s evacuation experience in Chapter V.
We've been trying to get money since [having applications denied after the first three months]... Take a look at my table over there. See my table there? That's from the other grant that I'm working on. And I don't want to put it away until I figure out whether or not I get that grant. And I've got another grant working now which is going to take hours. And not only is it going to take hours— don't think of me as someone who does well with forms. So I have these, like, nine forms that I have to fill out and I'm not sure I understand any of them. I'm an actually fairly bright guy, but what's this? And they're asking for numbers for things. It's a— anyway they're asking for things I don't have. I'm going through their forms and having difficulty figuring out their forms. They do not have someone to come hold my hand and tell me how to do this. I'll get through it, it won't be a big deal. I'll get through it. It's just that's where I'm at and every time I do a big thing, which is a grant, it's like, "Eh? I don't know how"... But it's a matter of the stress of not having a lot of money, coming back to where— everything is a stress, everything is a strain, everything is difficult and I keep telling people I will be fine. It's just going to take a certain amount of time... We've got income coming in...I've got social security. I'm doing okay. But if you lose about nine months of income [it's hard to manage financially], which is why I'm now in the grant world.

Frank and his wife had been overwhelmed with the stress of appealing denied claims and attempted to use their own savings to manage during their displacement. However, the burden of paying rent and other living expenses in addition to loss of income from other sources deflated their financial cushion. Over time, their financial vulnerability became a significant concern, which then combined with the stress brought about by re-entering the disaster assistance system.

Martha, a Jamestown resident in her 60s, recalled her experience with applying for assistance to help with the financial burdens of forced relocation immediately after the floods:

One of the first things we heard was “you have to register for FEMA.” So we were evacuated on Friday, and on Sunday my husband was registering online. I could not remember my social security number. I mean, that’s something you know, you rattle off. I could not remember it. Which gives you a sense of the amount of trauma. I mean, we were just, like—startled. We were plugged into all the different sources. Through the community meetings and otherwise, you know, word spread. We actually had a small-ish community in Longmont of expats, of evacuees... so through that I think we heard about different grants, and different aid... One of the things I was responsible for—[husband] was working. I mean, again, we needed the income. So, I kind of handled everything for us, pretty much. So I made all the phone calls, and I contacted, and I went and stood in lines, and I filled out all the forms. And one of the things we always said was, “there are people way worse off than us. So make sure you take care of them first.” So that was always—and a lot of our friends did that too, I found out. You asking me how did that feel, it was humiliating. I mean, I’ve won the top international awards in my field. I was—before I sort of retired, I was at the top of my game. And I know this sounds—I don’t know maybe this sounds
condescending or something, but I’d never stood in a food bank line. So it was—it felt odd, and asking for help is not something that people do very easily.

Despite common complaints about the confusing, intrusive, or overwhelming aspects of these programs, none of the older Jamestown evacuees with whom I spoke had sought out specialized senior services to assist with their needs. Martha’s reflections hint at some of the complex reasons underlying these reactions. Like others from her community, she had struggled with the shock of being extracted from a crippled environment and was at times overwhelmed with navigating bureaucratic systems while in the grip of trauma. Her household did not have the resources to build a new living from scratch, which meant that they had little choice but to piece together donated items and small grants to make ends meet. Being “on the dole” in this way conflicted with values of self-sufficiency and independence for many residents, and these struggles were difficult to articulate to others who had not shared their experiences. Through my interviews it became clear that these individuals’ status as “Jimtowners,” as they referred to themselves colloquially, generally trumped age as a notion central to their identity. This connection was only reinforced by the inability of outsiders to relate to their concerns. Seeking the assistance of SSOs simply was not an option that came to mind for many of the community’s elders. Instead, these individuals leaned on other trusted connections, particularly within their community, to navigate the flow of disaster assistance programs that streamed steadily into the region.

As was the case with most residents, all members of the town’s leadership had been affected by the disaster in some capacity because of the forced evacuation, infrastructure loss, or other disruptions. Due to the overwhelming magnitude and scale of the event, the mayor resigned
from her regular job\textsuperscript{27} and dedicated all of her energies toward disaster relief and recovery planning (Kelly 2015). In an effort to bring resources and technical assistance to the town, she contacted elected officials at the state level with requests for additional support and began collaborating with the parade of federal agencies that had been making its way through the region (Schoedinger 2014). Residents’ struggles with the disaster assistance process presented an additional challenge; however, engagement with state and federal agencies left little time for the town’s limited number of representatives to take on tracking residents or handing them off to human services agencies.

Instead, community members stepped up collectively to play a support role. A significant proportion of these residents, including seniors, used an online discussion forum to disseminate information. Archives of these conversations illustrate how Jimtowners communicated warnings about flood damage, tracked missing residents, and later disseminated information about where to find resources. The following is a selection of messages that residents posted on September 14, 2013, the second day of evacuations:

\texttt{[response to out-of-state relative]: [residents inquired about] walked up to our place yesterday. They are fine. Healthy and chipper. They will be staying in Jamestown and are choosing not to evacuate. Their house is safe, they are safe, and they are stocked up with food and water. There is a group of folks staying, so they will be well taken care of not to worry. I will let them know when I see them this morning that you asked for them.}

\texttt{My daughter is a disaster responder in NJ and worked extensively on Sandy relief. She emailed me this which I want to be available to everyone. I will be getting lots more info and will make available when as soon as I have it.}

\texttt{“Dad: One important first step that you should take, is when the number is available to register with FEMA to get disaster assistance when available, which may be for a few days. This emergency money will help with temp. housing needs and also in the long term it will be the main qualifying criteria (you will be given a FEMA number) for other disaster assistance. [name redacted] is monitoring the OEM twitter account for this information, as well as FEMA.GOV.}

\textsuperscript{27} Prior to the floods this had been a volunteer position.
When the number is available you can tell your Jamestown friends about this too. It is most important now that you regulate your body at this point. You have been through a lot of stress. You should begin to sleep and eat on a regular schedule and hydrate well. Also you and [spouse] should do some light exercises to help reduce the stress hormones. Talk soon.

[name redacted]”

[name redacted], Good work getting [name redacted] out and keeping Jtown internet alive and responding. Please let people know I have plenty of food in my garden, beets, kale, potatoes, excellent tomatoes, arugula, horseradish, carrots, kale, green beans and in the spring, spinach...may we all be there to enjoy that. As well my refrigerator is full. Take all food in the house for that matter, but please don’t take the T.V. Also remember I have at least 500G water in the cistern in the back of yard above the garden. Give [name redacted] and [name redacted] and [name redacted] and all left behind a big hug. There are so many stories, feelings, acts of kindness to keep in a journal of this incredible experience. More rain coming. Stay safe.

By September 15, one of the town’s elders had created a separate flood information website so that community members would not miss important notices due to the flurry of messages on the town’s discussion board. As the emergency phase transitioned into a less urgent relief period, residents continued using this crowd-sourced information distribution system. The mayor and other community leaders posted updates and “listened” in on the community’s needs, while Jimtowners shared experiences and insights about financial assistance applications, insurance claims, and other aspects of the disaster relief system. The discussion boards also served as a space to air frustrations and share expressions of support. As an example, after a number of discussions about problems with insurance companies in early October, one resident posted:

On Oct 9, my renewal date for homeowners with Traveler’s, they told me that they don’t do unoccupied dwellings. I told them that I was in a national disaster, that had rendered the house temporarily unoccupiable for about 9 months, because that’s a material component that they should be aware of.

Also, on Oct 9, I called DORA the Colorado Insurance Commission, and the customer facing rep told me there was nothing I could do about it except search for companies. After speaking with [agent name and phone number] from DORA, who appeared at the Oct 9 Jimtown meeting and she asked me to get the reason for the decline in writing, I called Traveler's on Oct 10. They agreed that they had declined on Oct 9. I asked for the reason Traveler's declined in writing, and they asked why I wanted it.
I told 'em that it was for the state insurance commission. They suddenly agreed to write me a policy. I don't know that they violated any regulation, but they sure changed their tune.

This is just the weirdest thing ever when I asked what changed from yesterday, they told me that they had a "confusion" on their end. Yesterday, I tried several other insurers, with no luck, especially AllSnakes and State Farm and Farmer's. Now I am insured, thanks to talking to DORA.

These online discussion forums linked Jimtowners with much-needed information and support in the weeks following the floods, and complemented weekly face-to-face meetings in town and in Boulder. However, it soon became apparent that the community nonetheless needed an official gatekeeper who understood residents’ concerns and could liaise on their behalf. For example, while a large number of older residents accessed information online, others were not computer literate, did not regularly use this mode of communication, or simply needed more help beyond the instructions that had been streaming in. One stakeholder shared an example of these struggles:

I think one of the things that families saw me do quite often was with some of these at-risk single females over 60. If there were meetings, whether it was about bridge construction, or the buy-out program, or you know, just basic recovery, building their houses, whatever, I would kind of gauge where they were at emotionally and quite often I would insert myself into some of the meetings they went to so they weren’t feeling like they were sitting there and—it’s really easy to feel like between their age and everything going on, it’s real easy for them to feel like things were just going over their heads. So that was part of what I did...was to kind of assess and figure out what meetings was important that I sit there beside them. I didn’t go to every meeting, but I—depending on where they were at could gauge that they would feel better having another set of ears. And I also had one woman that—she retired probably a year before the flood—that in the very beginning when I told her what we needed as far as FEMA paperwork, she just broke down in tears and said “I can't do this.” So the next day I was at her house, sat in her living room for four hours, spread her paperwork out over the floor, and we organized her paperwork because she was so overwhelmed.

And that’s the biggest thing that—with a federally declared disaster, that’s huge because as this disaster unfolded, I got to a point where every Monday morning I didn’t even wake up expecting that it was the same red tape as Friday afternoon. I just would wake up and start Monday morning with “okay this is what I need. How have you changed your requirements so I can get this?” Because as recovery unfolded, requirements changed almost daily...And what’s heartbreaking is I know full well, I could sit here and give you a list of the people that didn’t get
monies because they didn’t want to go through the red tape. They’d had it, they were done. And we all know that fire recovery takes about two years, flood recovery takes about five years. So this is not a fast process.

Drawing on local ties to a national nonprofit agency, the town secured funding for a community advocate to connect residents with human services and other resources. This person interfaced with outside organizations, guided their representatives in being more responsive to the local culture, and served as a critical bridge between community members and service providers. In other words, the community advocate provided a trusted local connection to fill the role that SSO representatives played for seniors in other communities, and in some cases even served as go-between with local elders and the county’s aging services unit.28

Residents’ discomfort with government agencies was cited as another reason why the community needed this buffer. One Jamestown stakeholder summarized this concern:

The people up there, they live up there for a reason. Because they like the isolation, and I would I think I could safely say the distrust of the government agencies whether it’s local, county or state or federal is pretty high. And one thing that [we] are well aware of is that in order to reach out to some of these mountain communities you’ve got to have that middle man, that liaison that knows the community and is also able to deal with the outside agencies. That’s crucial as far as I’m concerned.

Jimtowners were not uniformly apprehensive about interacting with representatives from outside organizations. Indeed, a few interviewees reported generally positive assessments of their experience with the disaster relief system. Still, the need for an advocate who could act on behalf of community members’ interests, particularly those of more vulnerable residents and those who had suffered severe impacts, was widely recognized. Close bonding ties between community members meant that people could request that the advocate reach out to those who were

28 The community advocate was not charged with representing seniors specifically; all residents were encouraged to utilize this person’s services as needed. However, the advocate represented a number of the town’s elders. Further, given older residents’ tendency not to view age group as a master status, designating this role in a way that would be interpreted as being reserved for “special needs” would likely have been a deterrent.
struggling and engage them in terms that were respectful of their identity as self-reliant mountain people. While the advocate used a number of different channels—both SSO services and other agencies—to help clients access resources, this personal connection played an important role in identifying and addressing their unmet needs.

Local representation and advocacy were essential for mountain residents’ financial assistance requests because their individual recovery needs differed from those of disaster survivors in other communities. The uniqueness of their claims made it difficult for residents to access resources on their own, and many applications were initially rejected. Appealing these decisions required ongoing negotiation with federal agencies which, as described above, was difficult for many mountain residents and would have been challenging for any applicant. Jimtowners relied heavily on the community advocate, mayor, and the networks these representatives had created to liaise with agencies on their behalf.

The stakes were even higher for seniors whose financial survival was on the line. For example, a number of residents experienced difficulties with obtaining funds to build the pedestrian bridges needed to access their homes. In these cases, homes were separated from roads by a deep creek bed, and could therefore only be safely reached using these connectors. The need for access bridges was somewhat unique to Colorado’s landscape. Gaining approval for these projects required nearly two years of discussions between federal agencies and mountain residents’ representatives at the local, county, and state levels due to federal decision-makers’ lack of understanding of the local terrain. Although the process of making repairs carried its own kaleidoscope of stressors, Jamestown’s concentric networks of representatives—and the social capital available to them through these networks—provided critical support for seniors and others whose appeals had initially fallen on deaf ears. In light of the skyrocketing costs
associated with rebuilding these access points, some elders would have faced permanent
displacement or financial ruin without this assistance. Accounts provided by residents,
stakeholders, and documentary sources suggest that efforts to back community members through
organizational coalition-building were largely successful and played an important role in
supporting older residents’ recovery.

**Summary**

Organizational networks in Boulder County provided flood-affected elders with support
and improved their access to resources in the aftermath of the disaster. Representatives of senior-
serving organizations relied on trust that they built with clients, as well as communication and
collaboration via inter-agency networks, to expand routine service offerings in response to the
disaster. Although most of the SSOs throughout Boulder County had little prior large-scale
disaster response or recovery experience, emergency management and long term recovery
officials benefitted from drawing on their expertise and actively incorporating them into
community response activities. These collaborations strengthened existing partnerships and
created new organizational linkages within and among Boulder County communities in support
of older adults’ disaster-related needs.

The social capital generated through these connections channeled technical expertise,
financial assistance, and other supports to seniors. However, my findings also call attention to
the limitations of SSO services. As noted by elders in Jamestown and elsewhere, in some cases
the social meanings that surround aging and age categories actually hindered service utilization
among residents. Additionally, access to these supports was unequal across communities and was
further influenced by individual circumstances. Thus, while the social capital generated through
SSO networks and inter-organizational bridges successfully improved outcomes among many
flood-affected elders, it would be inappropriate to simply conclude that these organizations were a panacea for their challenges. The mere involvement of SSOs in emergency response and recovery was not always sufficient to address seniors’ disproportionate disaster risk or impacts. In Chapter 6, I expand my discussion of organizational social capital by more closely examining how the deployment of socially embedded resources is mediated by the political economy of the disaster setting.
CHAPTER V
SENIORS’ NARRATIVES

Introduction

The primary goal of this dissertation research is to explore older adults’ experiences with disaster, particularly with respect to recovery. In the previous chapter I identified the role of organizational social capital in shaping disaster outcomes among older flood survivors in Boulder County. In this chapter I shift my analysis to the individual level. Below I discuss key themes from elders’ narratives about the 2013 floods and the ways in which they deployed socially embedded resources to support their recovery in the months and years following the disaster.

The literature examining long-term disaster recovery is limited, and studies focusing on this process among older adults are fewer still (Greenberg 2014). However, scholars have identified several factors that can influence the quality of recovery within this population. As with other groups, access to financial resources plays an important role in shaping seniors’ ability to recover. Fixed incomes make disaster-related expenses particularly challenging for this group, as earning capacity tends to decline at late stages of the life course (Childers 1999; Hariyama 2000; Jenkins, Laska, and Williamson 2007). The collapse of community infrastructure can limit seniors’ access to medical services, medications, and equipment, contributing to poor health outcomes. (Fernandez et al. 2002; Aldrich and Benson 2008; Adams et al. 2011). Informal support from social ties can be critical for seniors under both routine and non-routine circumstances, highlighting the potentially devastating consequences of displacement (Hutchins and Norris 1989; Sanders et al. 2003; Roberto et al. 2010; Jenkins 2014).
Yet the ways in which seniors experience and respond to challenges known to arise in the post-disaster environment are poorly understood. As I have argued in previous chapters, research examining these issues often adheres to and reproduces paternalistic assumptions about elders as passive victims. Social capital theory can challenge these assumptions by shedding light on conditions that support or handicap older adults in innovating, coping with, and adapting to system shocks (Beggs, Haines, and Hurlbert 1996; Aldrich 2012). In other words, social capital theory provides a lens for examining seniors’ agency while still acknowledging the ways in which the options available to them are shaped by the social structure. I explore these issues in the context of seniors’ experiences with the 2013 floods.

In order to retain the primacy of elders’ perspectives in my analysis, I organize my discussion around key themes from their narratives about factors that shaped the recovery process. First, I discuss financial pressures that the floods created for seniors, their efforts to address these issues through the disaster assistance system, and the ways in which they mobilized social capital to address challenges that emerged. Next, I describe the ways in which bureaucratic delays and uncertainty interrupted the recovery process. I then shift my focus to interviewees’ broader social networks and interactions. I conclude with a discussion of the ways in which collective narratives shaped older adults’ flood-related experiences and recovery strategies.

**Financial Pressures and Disaster Assistance**

Financial issues and the need for disaster assistance were among the most commonly discussed themes that emerged in seniors’ narratives. These concerns spanned across groups of
varying socioeconomic status. Study participants who had access to sufficient income, personal savings, or credit to manage expenses were better equipped to bear the burdens of repairs and displacement than those with greater financial constraints. However, the magnitude of disaster losses caused even relatively affluent individuals to need some amount of financial support. Thus, regardless of financial status, all but seven of my research participants had applied for disaster relief funds through FEMA or other federal agencies.

Approximately 75% of the interviewees who submitted applications through these agencies reported that the process had produced additional stress and frustration on top of that resulting from the disaster itself, although those who were eventually able to access funds generally emphasized their gratitude for the support provided. This group’s concerns primarily related to the amount of time, paperwork, or redundancy that applications required, the burdens these requirements placed on seniors who were working, and problems associated with bureaucratic decision-making timelines. In contrast, about one-quarter of those who utilized federal assistance programs reported that the application process had been very manageable. The majority of these individuals reported being entrepreneurial in their pursuit of assistance funds and having positive interactions with agency representatives. Others who reported positive experiences had relied upon a combination of formal and informal support to access these resources. I discuss these themes in greater detail below.

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29 Although I did not directly inquire about personal income, I developed a general understanding of research participants’ financial resources through my interviews.
30 Five of these individuals had only been affected by the disaster indirectly, and thus did not suffer significant financial losses.
Difficulties experienced with applying for and receiving support from large bureaucratic organizations stood out to many of Boulder County’s older flood survivors as significant barriers to recovery. Unfortunately, complaints about the prohibitively complex requirements of disaster assistance programs are common. Scholars have argued that disaster survivors, particularly within socially marginalized populations, regularly struggle with the task of seeking resources from monolithic bureaucratic organizations because they are less experienced in “working the system” (Huerta and Horton 1978; Bell, Kara, and Batterson 1978; Rovai 1994; Fothergill and Peek 2004; Dash et al. 2007; Masozera, Bailey, and Kerchner 2007). Accessing information, filling out paperwork, appealing decisions, and navigating complex administrative structures are challenging tasks requiring abilities that are often in short supply among individuals whose lives have been turned upside down by disaster.

Although these impediments are not limited to elders, scholars and practitioners have for decades emphasized the disproportionate burden that they can place on this population (Bolin 1988; Administration on Aging 1995; Fernandez 2002). Despite long-standing recognition of this issue, seniors have continued to struggle with navigating relief programs across geographies and disaster events (Jenkins et al. 2007; Adams 2011; Wang and Yarnal 2012; Onstad et al. 2012; Caruso and Kunzelman 2014; Greenberg 2014). The Colorado floods were no exception to this pattern, as many seniors reported feeling stressed and overwhelmed by the complex processes associated with disaster assistance programs. Repeated requests for documentation, constantly changing policies, and redundant discussions with agency representatives took up a considerable amount of older residents’ time and energy. Most seniors relied on informal assistance provided
through close social ties to help navigate the disaster assistance system or find ways to circumvent it.

As noted in the previous chapter, Jamestown residents shared guidance about submitting applications and connected one another to specific points of contact who had proven helpful. A pair of posts from the community’s online discussion forum illustrate the flow of information through these informal channels. One resident stated:

*On the lemonade out of lemons thing... it’s nice to be able to walk to Niwot Market and pick up a forgotten ingredient. Also, I finally get texting! Would give up those conveniences to be able to sit by the creek again and to see neighbors. I’ve had the interesting experience of thinking I’m seeing many of you around Boulder & Niwot. Over the past weeks I thought I saw [names redacted]. Today I thought I saw [name redacted]. One day I hope it will really be you I’m seeing around town. Also, anyone else having some really hard days surrounded my mostly ok and even good ones? Yesterday was the pits climbing what felt like a mountain of paperwork and navigating confusing FEMA mazes.*

Another replied:

*[resident name redacted], [agent name redacted] is a FEMA employee and she is stationed in the town hall. She was verrrrry helpful to us. I suggest going there to meet with her or maybe you can talk to her if you call the town hall. She may be able to help cut through some of the red tape.*

Informal informational support such as this was instrumental in helping some seniors work through confusion and other barriers to navigating the disaster assistance system. Other seniors utilized formal support provided by SSO representatives, temporary case managers, and eventually, the county’s long-term flood recovery group to meet these needs. Connections to organizations were particularly important for vulnerable elders who had less robust personal support networks and whose cases required more assistance than what other social connections could provide; yet they often contributed their own frustrations. For example, Jean, a Jamestown elder, observed:
I got appointed a caseworker with the county, and eventually you ended up with all kinds of different caseworkers, but I had a few really good ones. Then I had a few that for whatever reason couldn't be effective, and it's not anything that they weren't good at it. Sometimes it was a communication style, or sometimes they didn't realize what a mountain situation is, so, "Why do you need this [chuckles]?" And they had to get some of these people trained up really fast. Try to train up 100 some caseworker volunteers in a couple of days. You can get them set to handle any situation and answer any question, that's not something that is going to be accomplished 100%. But here you have these people volunteering, not knowing what's going to be asked of them. But they're going to go ahead and do it anyways and do the best they can. It's all a lot of that. I learned a lot of patience and a lot of forgiveness, I think, during the flood.

The process of setting up case management moved in fits and starts that were at times frustrating for seniors. These services had been initiated using a patchwork of inexperienced volunteers, service providers, and social workers during the nine-month period it took to initiate a federally funded case management contract, and the system continued to operate on a steep learning curve for several months thereafter. As Jean noted, however, these support services ultimately helped with the burden of managing the disaster relief system.

Although interviewees reported benefitting from an array of formal and informal supports to navigate disaster assistance programs, some problems were intrinsic to the system itself and therefore could not be mitigated. This issue is evidenced by the experiences of seniors who were highly skilled in “working the system” but who nonetheless found themselves overwhelmed with the sheer workload it produced. For instance, Sophia, a 75-year-old Lyons retiree, was forced to put off our interview for a full two months for this very reason. Sophia had to ask repeatedly to delay scheduling our conversation because the applications were taking up such a large portion of her time. Upon our meeting, she recalled:

Thank goodness I can understand English, and so many people that were affected with the flood can't. In the trailer parks and stuff, they've got Spanish people that—I don't know how they did it because I wouldn't see you for two months because I just had all this paperwork that you just have to hit it, hit it, hit it. And even today I probably put in six hours already. I [want to be able to] just read a book someday, work in my yard [laughter]. That's a concern for older people. I think that it's overwhelming, the amount of paperwork that's expected of us.
Sophia’s comments are consistent with those of other seniors whose property sustained significant damage, requiring them to pursue funding from a variety of federal sources. Such cases call attention to the limits of personal resources in the face of financial need. To elaborate, Sophia deployed an impressive array of social and financial resources in an effort to keep possession of her cherished home, which had sustained tens of thousands of dollars’ worth of damage in the floods. Recognizing that she would need to take action quickly to keep the home from deteriorating entirely, she activated a sizeable social network of bonding and bridging ties to assist with immediate needs. Nearby friends washed her clothes and performed small chores to free up time for other tasks. Family members provided lodging, enabling her to bypass the tight and increasingly expensive rental market. Neighbors stored her salvaged belongings and reached out to volunteer groups on her behalf. The voluntary organizations in turn spent hours clearing debris and removing drywall from her home stop the spread of mold.

By activating a diverse array of personal and network resources, Sophia was able to salvage the house without pursuing assistance through formal channels. However, there were limits to what her network could offer. After spending thousands of dollars in personal funds and insurance compensation to restore her home to a state of habitability, she still lacked the financial resources required to keep it from potentially being condemned due to new post-disaster floodplain regulations. Hence, she nonetheless ended up spending most of her waking hours working on disaster assistance applications. Sophia was a highly organized and competent person who had the time to dedicate toward these applications due to her retirement status; yet even under these circumstances she found the process to be anxiety-producing overwhelming. The stack of paperwork associated with her various applications and claims was at least 8 inches thick.
“Going Rogue:” Coping and Adaptation Outside of the Formal Assistance Arena

In an attempt to avoid the problems and constraints associated with bureaucratic systems, some flood-affected seniors chose to either limit, discontinue, or entirely forgo engagement with them. These individuals tended to rely heavily on informal assistance provided through close bonding ties to support their recovery in lieu of formal support. As an example of the first pattern, limiting interaction with the system, Ina, a 71-year-old displaced Lyons resident, described how FEMA’s time-consuming requirements and redundant requests nearly led her to give up on her application for relocation assistance:

With FEMA it was really stressful. They wanted me to go over to the school and talk to them every day—tell them the same story every single day. And yet they wouldn’t give me any answers. I said, "I’ve got a business to run. This is too stressful. I can’t be coming back." And they said, "Oh, you have to," and I said, "No." So I didn’t go back. I checked in with them every once in a while but I felt like I had to move on, and by telling it every single day, the same thing over and over again—I showed them the pictures I had and they just barely looked at them. But it was holding me into that stressful time, and I know that wasn’t good for me, because I’m a cancer survivor, and you can’t stay there, so I had to do what I could.

Although Ina did eventually obtain funding from FEMA, her refusal to follow agents’ instructions could have compromised the viability of her application. She desperately needed this assistance, as her mobile home had been destroyed in the floods. Yet disengaging from the process was a risk that she felt compelled to take due to the financial strain and added emotional duress that repeated visits were causing. Lodging provided by family and friends enabled her to negotiate these competing needs until she felt stable enough to re-engage with the application process.

Ina was once again forced to call upon informal assistance when her application for a business support loan was denied by FEMA’s Small Business Association (SBA). As a low income earner with few assets and pre-existing debt, she faced financial ruin if she could not
keep her small business operational. Yet these very characteristics were the reasons why her application was denied. Fortunately, Ina’s close personal connection with the landlord from whom she rented space for her shop yielded critical supplemental support. This person worked with her to offset expenses while the town remained evacuated, enabling her to cope with reduced revenue. Moreover, her landlord was continuing to keep the rent low—despite skyrocketing property values and a competitive market—two years after the floods, as Ina’s business had not yet recovered from the displacement of its low-income client base. Her case highlights the importance of access to informal instrumental support when the formal disaster assistance arena fails to provide an adequate safety net. Other seniors similarly relied upon close network ties upon encountering barriers to formal assistance, calling on nearby friends and family to access needed resources.

In others cases, seniors avoided becoming involved with disaster relief programs and decision-making entities altogether, despite having a genuine financial need. The decision to forego federal funds and bypass bureaucratic decision-making bodies required physical ability, technical knowledge, and financial resources in addition to a willingness to risk losing these investments in the event that authorities decided to condemn their homes despite all of their work. For example, Sharon and Paul, a couple in their 60s, began rebuilding their severely damaged home by hand little more than a week after the flood. The couple explained that they felt this was their only option because they could not afford the delays associated with receiving disaster assistance or even obtaining formal approval. Sharon recalled:

31 Here I reference elders who managed repairs and other needs using adaptation and coping strategies rather than those who could independently afford to pay for all flood-related expenses.
32 Repairs done to a home considered to be more than 50% damaged risked being condemned due to changing floodplain and floodway designations.
We're not anarchists or something, but in this field it was that kind of decision of “we just have to act independently on our own. We can't wait for permission because we would be sunk.” We didn't have an income coming in where we could afford, "Let's go rent a house and also pay our mortgage." We just, as [low-income earners], we're kind of always close to the line. We didn't have a lot of extra resources and we didn't even want to [risk asking for federal assistance] anyway, it turns out. We saw that we could rebuild [the house]. We also felt that we didn’t want to be judged as so broken that they would write us off as "this house can't be rebuilt." We were kind of cautious about that judgment... If it's more than 50% damaged, you're not supposed to rebuild. There's a [regulation] on that.

Paul added:

We're not trying to do something crazy. We're trying save our house. There's only four people working in the [county]building department. They just had a thousand houses destroyed or damaged. They can't even process the depth. And so, they're saying, "Well, you just wait over here." It's like going into a field hospital in a war and telling people, "I'm sorry, you're just going to have to die because the paperwork isn't done." You can't say this. You'll be taken out and hung later. Government doesn't have that kind of authority to tell people to die.

Sharon and Paul went on to explain how they felt that rebuilding immediately with the resources they could muster at the time was the only way to save their rapidly crumbling home. They recalled two primary considerations that led them to this decision. First, the county permitting department was unable to process the large volume of requests and inquiries it was receiving in the aftermath of the floods. Second, they feared that waiting for federal disaster assistance funds to finance the reconstruction would add to these delays and further compromise their ability to rebuild.

Informal support helped Sharon and Paul actualize this recovery strategy. They possessed considerable building experience and were thus able to design the project and purchase building materials. However, they needed assistance with labor and lodging. Younger family members who lived nearby donated labor and a friend who was house sitting in a large home provided them with a place to stay until they were able to get their own home stabilized and enclosed.
Had they not taken action quickly and independently, the couple reasoned, they would have been ruined financially during the wait for federal assistance. To validate this supposition, they explained that nearly two-and-a-half years after the floods, neighbors whose properties had suffered similar damage were in fact still paying mortgages on uninhabitable homes that they were not allowed to rebuild while waiting to receive compensation through the federal buy-out program. Although their financial reserves were limited, Paul and Sharon had access to sufficient social, human, and economic capital to salvage their home without formal assistance. Seniors who lacked such resources and informal supports had little choice but to pursue financial support or otherwise cope with flood losses to the best of their ability.

In some cases, nonprofit organizations and SSOs provided easier access to resources, enabling seniors to bypass federal systems. Mara, a mountain resident, recalled how word-of-mouth information from a neighbor led her to local services after a frustrating experience with the Disaster Assistance Center (DAC) discouraged her from seeking assistance with FEMA:

That was the other weird thing was that the amount of misinformation—it wasn't really disinformation—about what you had to do. I went down to the center that they established out on 55th and Arapahoe and went to their offices there. I think I talked to three different people and got three different answers to the same question. Finally, I just walked away in frustration and was pretty much ready to just give up and say, "Okay, I'm just going to—there's going to be collection actions [due to debt], and I can't do anything about it. And I said something to—I think it was to [a neighbor with connections to nonprofit organizations] actually, and she said, "Go to [a local nonprofit organization]," and I said, "Oh, [organization name redacted]." And none of these people at the place where—I can't remember what they call them—the FEMA centers. None of these people ever said that. It was such an obvious answer, and I didn't think about it. I had no idea.

Services offered by an array of smaller-scale organizations helped seniors to manage flood-related losses without engaging the federal disaster assistance system. While Mara nonetheless sustained significant financial impacts, these services supported her enough to pay her mortgage and provided assistance with utilities until her financial situation stabilized. The bridging social
capital that Mara was able to activate by connecting with her neighbor enhanced her ability to cope with flood-related economic pressures by opening up another pathway to formal support.

“People Dissed FEMA, But I Thought They Were Great”: Positive Experiences with Disaster Assistance

It is important to note that nearly one-fifth of my sample—eight seniors in total—reported having had little or no trouble accessing disaster assistance. These interviewees primarily represented one of two broad sets of characteristics. The majority of this subgroup were highly organized, active, and internet savvy semi- or full retirees who were undaunted at the prospect of independently navigating disaster assistance programs. The second subset was comprised of individuals who relied heavily on assistance provided by close ties and organizational representatives.

The seniors who reported positive experiences with independently managing their financial assistance applications had all visited a DAC relatively quickly after the floods and found agency representatives there to be attentive, knowledgeable, and helpful. Autumn, a 71-year old Boulder resident whose home’s finished basement level was severely flooded, explained that all of her interactions with agency representatives were positive and had yielded good results:

The relief center was terrific. Was so incredibly organized. You go in, they offer you some water and say, “here, sit down. Tell us about it.” So, first thing—let you get a little emotion out. It was so smart. Then they had all these little tables... And so, they taught the person who listened to your feelings, said, “I want you to go here, here, here, here and here. And you don’t need to go here, you don’t need to go here.” And so then, there was almost no wait. And I went from one nice person to another. Somebody helped me apply for [an Individual Assistance grant]. And, they mailed it in for me, or whatever you do. My husband... was trying his best also to do what he could do. So he was ordering the pizzas. He was checking into the assistance from FEMA. Filling all that out as soon as possible. It was like, twenty-four hours later that the FEMA guy came [to our house]. He walked around, he looked at it. He said, “I see what’s going on here.
And it’s particularly difficult too because you have all these levels... it’s half your basement. It’s furnished and used.” And we applied and within—it was so simple—within four days there was ten thousand dollars in my bank account. I had to get the washing machine, all the appliances had to be replaced. And at the end, you know then two weeks, three weeks later somebody called me from FEMA and said, “you know, we’re just checking to see how you’re doin’?” I said, “You’re checking to see how I’m doing?” (Laughs). I said, “Well, how kind of you.” And they said, “well, we had wondered how much your furnace actually cost to get replaced.” And I said, “Well, this amount.” And he said, “well, we only put down half of that in our estimate. Come on in and we’ll file a form to get the rest of it.” I went in and I thought, “oh my goodness.” A week later, there was another fifteen hundred dollars in my bank account. It was just remarkable. Instantly, and kindly, and with no hassle. I’m a FEMA fan...

And then—so, I have some carpentry skills. And I’ve done a lot of the carpentry around here, and having those skills and having these people who would come, who kept coming. You know, weekend after weekend. I would say, “this is the work that we’re doing this weekend. Come if you feel like it. Thank you so much. We’ll have people at lunch. You know, come when you can.” And so it required getting all the materials and the tools, and really amazing organizing. But, I probably got another ten thousand dollars’ worth of help from people in my network.

Autumn’s experience with FEMA was noteworthy due to the ease of her application process, the follow-up that agency representatives conducted, and her skill in extending these funds by deploying social capital to meet nearly all of her remaining expenses. Because she was very active in a range of community and social organizations, Autumn had a vast network comprised of both strong and weak social ties willing to donate time and labor under her guidance. Additionally, the DAC initiated contact with volunteer groups who performed more specialized services such as mold mitigation. Moreover, family members sent approximately $2,500 to help cover her costs. In the end, after turning $14,000 into $24,000 in repairs, she estimated only having paid $500 in out-of-pocket expenses. It is unclear whether additional funds would have been available from FEMA had Autumn needed them. However, her positive interactions with agency representatives and her ability to complete all needed repairs with a combination of formal and informal support served as a buffer from many of the stressors reported by other research participants.
Volunteer labor played an important role for all of the seniors in this subgroup, as did the ability to maintain a physical presence in or near their damaged homes. Volunteer labor helped to supplement costs not covered by federal funds, thereby reducing direct financial impacts. However, being able to capitalize on this assistance at its peak meant being able to usher helpers in and direct their work—an option that many displaced residents did not have at the time. For instance, Blanche, a 66-year-old retiree from Lyons, described seeking out organizations that were active in the area in the aftermath of the floods to request assistance with cleaning up debris and flood damage on her property:

*I think it was so stressful, so traumatic for us, but we’re both [self and spouse] retired, so we had time. We didn’t have to go back to our jobs, and this was, I think, a huge issue for a lot of people. Even if in your workplace it’s like, “Oh, yeah. Stay home for a week. Take care of business.” It’s like—“but this is going to be months, not a week.” And so I think it was much harder on people who had to then go to work in the middle of all this. The other thing I noticed that made a difference is that when some people’s home was made unlivable by this, they went and had to stay with friends or family that—farther away, so they weren’t close by. And if you weren’t right here to find [helpful community member] or to talk to Team Rubicon, or to take advantage of the people that are hovering around, wanting to help, then I think you were just kind of somewhere else going, "I don’t know what to do, I’m not in the loop, really." And some people even left the state because they had nowhere to go. I mean, it wasn’t like you could just fix your place up in a few days and move back into it. You know there’s still houses that are just sitting there, empty, and people even pay mortgages on them, still going, "I don’t know what’s going to happen. I’m waiting to hear about a buyout or what to do." We weren’t in that kind of a situation and I think it made it easier for us, and also from just talking to some other people, I sort of gathered that [spouse] and I are a little more proactive type people, like we’re not afraid to go talk to strangers, we’re not—we just kept introducing ourselves, talking to everybody we could, and being willing to let people come to our house.

Recalling her experience with FEMA, she added:

*All the FEMA people were really helpful and they had set up shop here in the elementary school. And that was another great resource, because they give you money. Then you’d say, "Okay, well but we have all these other things." So they’d say, "Well, you can appeal it. You write a letter. You have these receipts and estimates and all that and bring the letter to us." Then they look at your packet that you were going to submit for your appeal and they’d say, "Okay, get rid of that sentence. Put in a little paragraph saying this. Do this and do this..." And they were right here, and you could keep going to them and talking to them and tell them what’s going on with you, and they’d be telling what was going on. They keep telling... But then they left, they had to leave.
They had to move on to another disaster or whatever. So it's like you've got to make hay while the sun shines. You've got to take advantage of these folks while they're here. But some people were on such a state of shock and just that paralyzed feeling that we felt at first, how do you begin to deal with this much massive damage?... And so you had to really just take advantage of all this stuff that was happening and then they'd say, 'I'm reading through your packet now, this will work. I'll fax it over to the right people for you.'

Unlike Autumn, Blanche and her spouse ended up paying more than $50,000 in out-of-pocket expenses on top of receiving 2,000 hours in volunteer labor and unspecified quantity of FEMA funds. Nevertheless, they both felt that they had been treated fairly and accessed the maximum amount of help possible. They had been extremely entrepreneurial in their pursuit of disaster assistance, which left them feeling empowered and supported despite the loss they had incurred.

The second subgroup of elders who reported positive experiences relied on trusted representatives to assist with navigating the disaster relief system. In each of these cases, a combination of formal and informal social ties to helped interviewees manage various needs. Accounts shared by Rosalia, an 82-year-old retiree who was displaced from her mobile home in Longmont, serve to illustrate these experiences.

Rosalia was a capable and active senior who likely could have managed disaster assistance applications on her own under normal circumstances. However, she was diagnosed with a life-threatening illness shortly after the disaster, and a year-long treatment process left her too ill to do so. Fortunately, a sizeable support network coalesced to ensure her needs were met. She had lived with her adult son at the time of the floods; her daughter moved from out-of-state to help as a caregiver during much of her illness; and shortly before falling ill she had developed a good rapport with a city case manager who was doing outreach with displaced mobile home residents. Rosalia’s case manager—whom she referred to as a friend by the time of our
interview—helped her find a storage unit for salvaged belongings, manage rental assistance during her year-and-a-half displacement, and ultimately to purchase a new mobile home. Despite having moved five times during this period, Rosalia reported that all her needs had been taken care of and that she experienced no problems with the disaster assistance system. Her case manager had served as a single point of contact that shielded her from having to navigate the complex systems required to access needed resources. This support, alongside that provided by her family, freed up energy for Rosalia to simply focus on her health. Reflecting on her experiences, she recalled:

*It was terrible. I said, "Where are we going to live?" Because the rents are so high here in Longmont. So I thought, "What am I going to do?" They had taken my trailer away already, and I didn't know what to do. It was paid for and everything, because it was just a little oldie, but it was mine. I was worried about that. And [case manager] got a hold of me, and that was it. She helped me a lot. She did everything.*

Rosalia’s story demonstrates how seniors who might otherwise have encountered difficulties accessing disaster assistance in the aftermath of the floods utilized formal and informal social ties to assist with the process. The other two older adults in my dataset who reported complete satisfaction with their receipt of federal assistance funds despite having limited direct involvement with the application process reported having similar support.

The examples outlined above touch upon key issues underlying seniors’ financial needs, the ways in which they utilized social capital to meet them, and the limits of socially-embedded resources. A large portion of seniors found paperwork and other requirements overwhelming and discouraging. These individuals relied primarily on informal assistance obtained through close social ties to manage such challenges. However, bridging ties and formal support through service...
provider organizations also played a role in connecting seniors to resources and helping them supplement unmet needs.

**Bureaucratic Delays and Prolonged Uncertainty**

Adams and colleagues (2011) suggest that older adults in post-Hurricane Katrina New Orleans experienced fewer stressors stemming from prolonged uncertainty relative to middle-aged persons because they were better equipped to cope with financial losses. Their research found that elders were more willing to “make it on their own without government help,” which enabled them to develop a sense of closure and avoid the stress of such delays. Additionally, they contend that middle-aged residents’ position in the “sandwich generation” further exacerbated their ability to manage drawn-out bureaucratic processes. However, my findings suggest that this coping strategy is not an option for seniors whose losses are large enough to push them into financial insolvency. Additionally, although elders are not as likely as younger persons to be acting as caregivers for both younger and older family members, they are more likely to experience a combination of other obstacles owing to their stage in the life course. My data suggest that conditions such as these leave some seniors similarly exposed to the negative effects of uncertainty.

Costs and uncertainty related to bureaucratic decision-making timelines created significant barriers to recovery for some interviewees. Those whose homes were destroyed entirely, suffered extensive flood-related damage, or were otherwise left uninhabitable by the floods were particularly susceptible to such obstacles. Disaster losses of this magnitude presented enormous economic burdens that many seniors were unable to manage without substantial disaster assistance funds. Even property owners who were able to complete repairs using their own labor or finances faced significant delays due to convoluted and expensive
permitting processes. The complex bureaucratic systems intended to support these residents were notoriously slow-moving, placing many program participants in a years-long state of suspended recovery. Below I discuss how these delays played out for seniors who were forced to navigate bureaucratic decision-making processes in order to remediate or receive compensation for flood damage.

“With All These Unknowns, I’m in Limbo”: Suspended States of Recovery

Seniors whose housing tenure or accessibility remained in question for months or even years after the floods reported that the prolonged delays and uncertainty had been a source of chronic stress. Although case management and other forms of organizational assistance were available to help with navigating the disaster recovery bureaucracy, even those who utilized such support generously nonetheless remained in a suspended state of recovery due to lengthy decision-making or appeals processes. Moreover, local organizational representatives were largely unable to ease these burdens by making the system work more quickly. For example, a housing recovery worker for the Town of Lyons was quoted in a local newspaper as stating that despite being told by FEMA that the home buyout process would take two to three years, she had wrongly assumed that she would have some discretion in introducing efficiencies that could speed up this timeline (Burness 2016).

Cases involving getting access to homes that were scattered throughout Boulder County’s mountain communities and the greater Lyons area provide a view on some of these challenges. In many such cases, homes were undamaged but nonetheless inaccessible because the bridges needed to access them were washed away in the floods. Yet regulations crafted in response to the disaster made replacement bridges prohibitively expensive. Even the temporary bridges allowed under special permits cost several thousands of dollars. Residents who could not afford these
costs were forced to instead use dangerous makeshift structures to reach their homes. For example, a local newspaper article featured an 82-year-old Lyons resident living on a fixed income whose permanent replacement bridge would cost $160,000. The woman was eligible for partial financing through the U.S. Department of Housing and Urban Development (HUD); however, the agency would only cover half of this cost (Brennan 2014b). More than a year after the flood, a set of narrow planks—clearly a safety risk—served as a point of access to the woman’s home because she could not afford the $80,000 she needed for the replacement bridge.

As stated briefly in the previous chapter, issues such as these triggered multi-level coordination among government representatives in an effort to pressure federal agencies to fund home access projects. While their advocacy efforts were ultimately successful, this process took well over a year. Further, the litany of permits, engineering studies, and other requirements that had to be addressed in order to such build bridges once financing was available took nearly just as long, leaving seniors in a state of suspended recovery.

Darla, a resident in her 60s, shared the frustrations she experienced with replacing the pedestrian bridge needed to access her modest home:

As soon as I found out that I couldn’t get to my house—that the bridge was gone—that became an un-ending process... For a time, I could get—Initially, people built planks so that I could get over there across the creek... It used to be a little plank bridge when I moved in, for years and years. And it just started finally sinking. The beams started rotting. So I had a new bridge built sometime before the flood—not even ten years. Maybe seven years before the flood. It cost me $6,000 and it was really sturdy. We used to laugh that that bridge was going to outlast all of us...Then when it came to building a new one, it’s taken two-and-a half years to do this. People have built entire houses before I could build my footbridge. And I have piles of paper about four inches thick just for the bridge alone. I’ve been to 12 meetings at least, with a variety of people. Anywhere from five to eight people — engineers, the town mayor, the flood people, about the bridge. For many of the items, I had to get bids from three different contractors. Not just, “Okay, this looks good,” but three different bids. Every step of the way was nothing but pulling my hair...
out, and tears, and how fast can I get to my therapist before I start beating the walls. You've got
to be kidding me. None of it ever made sense to me. They had to study every rock in this creek,
every drop of water that goes under the bridge, every inch of soil. So many things were
measured. Thousands and thousands and thousands of dollars for all these surveys... Just to get
the permits. And then I'm thinking—boy, the day I got my permit number, I wrote it in a bunch of
places. I practically tattooed it on my hand. It's like "Wow, I got a permit finally." Just getting to
that point.

And then that wasn't even the half of it. It was everything after that. Just day, after day, after day.
When they told me that the bridge was going to be about [more than one-quarter of the average
home price], I was speechless. What a waste of money this is. And it's all the rules and
regulations. You can't do this until you've studied that. And you can't get a permit until we have
this, and this, and this. I just feel for anybody dealing with Boulder County at all. And it's just
not Boulder County. A lot of it is the flood rules and regulations now. And there were so many
diff—I mean, we had the [local officials] and then the county people and so many different
branches of people. It was, and still is, a nightmare. And [after the bridge was constructed] I
walk across the bridge, and it's like walking across the Golden Gate Bridge. And then on the
other side is a little shanty house.

Throughout our conversation, Darla repeatedly expressed gratitude for all the assistance she had
received, even from the organizations that had contributed to these delays. She recognized that
her situation would have been far more dire had she not obtained the funding needed to make the
home accessible, and that some delays were inevitable. Yet uncertainty during the time leading
up to the approval of her application, combined with layers of decision-making, permitting, and
other emergent obstacles that threatened to derail the project in the year afterward, was a
stressful experience that stymied her ability to recover and move on from the disaster. Seniors
who participated in federal home buy-out programs because their homes were irreparably
damaged or destroyed faced a similar situation, as there were no guarantees of purchase until
projects received final approval. Many those who sought federal assistance funds are still
awaiting compensation at the time of this writing.
“Now I’m Totally Depleted”: Bureaucratic Requirements as Constraints on Recovery

Compounding the stress of prolonged uncertainty associated with bureaucratic decision-making processes was the additional financial strain they placed on some seniors. As noted in previous sections, those who had active mortgages were required to continue making payments on uninhabitable homes throughout their displacement. In Lyons, residents were also required to continue paying for utilities that they were not able to use because the town needed the income. Even among those who attempted to independently repair their homes by hand, as a number of seniors did, permitting requirements added thousands of dollars to project costs and resulted in an ongoing back-and-forth with government officials at the local, county, and state levels to obtain approvals.

As an illustration of the amount of strain these issues placed on homeowners, at a September 2015 community meeting in Lyons, a 66-year-old elder who had lived in her home for 34 years tearfully stated that she had contemplated taking her own life as a result of the frustrations and setbacks she had experienced in the process of trying to rebuild her home (Aguilar 2015; Torres 2015). While certain aspects of this resident’s circumstances were extreme, the conditions under which she was trying to rebuild were not uncommon among residents of the Confluence neighborhood—so named because of its location near the convergence of the North and South St. Vrain rivers. This neighborhood witnessed some of the most severe flood impacts, and several of its households entered the federal buyout program.

One Confluence resident, Quinne,35 had lost nearly everything in her home, which had been heavily damaged and made uninhabitable by the floods. Despite receiving limited insurance

35 Although I did not speak directly to this senior, as I explain below, I have given her a pseudonym out of respect for her privacy.
funds and rental assistance from FEMA, the woman and her partner had struggled to fund their displacement, in addition to their mortgage and utility payments, in the months following the floods (Louzan 2016). The situation further deteriorated when Quinne’s partner passed away unexpectedly a little more than a year after the floods, marking the beginning of a string of tragedies that left her bereft of her mother, father, and best friend in the six months that ensued. Determined to rebuild the home as a memorial to her partner, she depleted what remaining funds she had left simply initiating the series of studies and permits required to start the project. Further, in the fall of 2015 and spring of 2016, Quinne was hospitalized twice with serious gallbladder infections that led to sepsis.

A GoFundMe page set up by a neighbor showcased the woman’s plight while also calling attention to the fact that her difficulties with the rebuilding process were not unique:

Like many who have experienced this process, [Quinne] has been navigating the grueling process of obtaining approvable building permit to safely rebuild her home. Recently, local news has finally afforded greater attention to this exhausting process, validating the painful process that "flood displaced" residents are still contending with years after the disaster: financing endless engineering studies, navigating and funding re-application after reapplication, re-tracking steps when flood plain information changes or is corrected from inaccurate advice, paying and re-paying fees, affording contractor expenses... all while displaced from a "normal" home and enduring the rollercoaster of emotions and emotional trauma that accompany the process...

This is a campaign to start the process rolling and to help [Quinne] get back on the road to living her life again. Exhausted and depleted, only a few weeks ago [Quinne] was about to give up on her home and walk away defeated. Several of us from her community have helped renew her hope, and now we are asking you to please help us come together to lighten her burden and provide a last chance for [Quinne’s] home. Sometimes life throws too much pain for one person to bare alone, and a circle of fellow humans can help dissipate it without over-burdening any one person. Please join our circle to help lighten her burden.

Having lived in the community for decades and spent more than 20 years as a member of the Lyons Fire Department, Quinne had a number of social ties in the area. She leaned on her personal network as a last ditch effort to stabilize her living situation, securing an RV on loan so
that she could return to her property and dedicate all remaining resources toward rebuilding her home (Calwood 2016). Yet, as described in the excerpt above, her individual efforts fell short. Had it not been for the intervention of those who chose to advocate on her behalf, she would likely have been forced to give up on this project with little to show for having exhausted all of her remaining funds aside from even greater financial stress.

Although others in the Confluence neighborhood commented in casual conversation that Quinne had been somewhat uncomfortable with being in the spotlight, her case drew significant attention due to the social capital that her network ties deployed on her behalf. These advocates organized a social media campaign that built upon earlier efforts to showcase the neighborhood’s broader struggles with the permitting process to local news media. They called on others to get the word out as well, bringing in donations from distant locations and transforming the campaign into a community-wide fundraising event. Furthermore, they also coordinated with nonprofit groups, community organizations, and local businesses to provide in-kind donations of labor and further reduce Quinne’s rebuilding costs. The ultimate success of these efforts is yet to be determined at the time of this writing, as activities are ongoing. However, Quinne’s advocates seemed confident that they were on track to prove fruitful.

I did not interview Quinne, and her voice is intentionally not represented here. Her story is so distinct that it would have been impossible to touch upon the issues relevant to her situation while also maintaining her anonymity. However, Quinne’s case is important to include here, if only in the form of secondary sources, because it so clearly demonstrates the ways in which individual obstacles that are challenging by all accounts, regardless of age, can be particularly difficult for seniors. To elaborate, the risk of experiencing intersecting challenges related to fixed incomes, the loss of loved ones, and personal illness in addition to the frustrations associated
with unwieldy and slow-moving bureaucratic systems is amplified at this stage in the life course. The combination of such obstacles can make disaster recovery even more challenging for seniors because they often have modest financial resources (Fernandez et al. 2002; Greenhouse 2012); are more likely to have severe or chronic health problems (Cherniak 2008; West et al. 2010; Ward and Schiller 2013; Jenkins et al. 2014); and are at greater risk of other stressful life events, such as health crises or bereavement (Heyman and Gianturco 1973; Hardy, Concato, and Gill 2002).

Social Interaction and Displacement

Beyond leveraging social ties to access resources such as lodging, labor, and information in the aftermath of the 2013 floods, older adults called upon these networks to meet less “tangible” needs. Below I shift my discussion of social capital away from an earlier focus on instrumental forms of support and explore the ways in which affective social resources shaped seniors’ flood recovery. I begin by briefly reintroducing themes from the literature on older adults’ post-disaster support networks and linking them with the social capital framework using Nan Lin’s (1999, 2001) discussions of instrumental and expressive action. I then analyze how the 2013 floods shaped expressive action among displaced residents.

As discussed in Chapter 2, the literature on disaster impacts among older adults calls attention to the importance of informal social networks. For instance, Roberto et al. (2009) find that older New Orleanians’ friend and family ties provided critical emotional and instrumental support following Hurricane Katrina. They argue that the personal nature of these connections was uniquely valuable, stating that “for the majority of older adults, assistance received through formal networks supplements, but does not replace the social support received from members of their informal networks” (Roberto et al. 2009: 135). Research presented by Norris and Kaniasty
(1996) sheds light on why the benefits of personal relationships may be difficult to substitute through formal channels alone. They find that the mere perception of social support mediates disaster-related stress independent of actual support received, suggesting that the affective benefits derived from intimate social connections imbue these relationships with value independent of their ability to provide material support. Bringing a social capital perspective to these issues can further illuminate how older adults leverage different types of social connections and the functions these relationships serve.

Nan Lin (1999; 2001) distinguishes between two kinds of expected returns that guide actors’ investments in social capital. Instrumental actions are undertaken with the expectation of economic, political, or social gain (e.g., social debt, respect, or reputation). Expressive actions, on the other hand, are generally aimed at preserving resources and guarding against resource loss. Actors with shared interests or resources maintain relationships for expressive purposes and receive returns in the forms of physical health, mental health, or life satisfaction. Research findings such as those discussed above demonstrate the need to explore how older adults undertake both instrumental and expressive actions to manage disaster impacts.

“Thank Goodness I Have People”: Social Interaction in the Post-Disaster Landscape

The value of social connectedness and social interaction emerged as overarching themes that spanned a broad cross section of seniors’ flood narratives. Although most interviewees relied upon personal networks for some amount of instrumental support (e.g., lodging, labor, information), they also emphasized the feelings of support that personal relationships had afforded them. Thus, while distinctions between instrumental and expressive actions were blurred in the aftermath of the floods, residents’ narratives focused in large part on the intrinsic value of their relationships. The act of social exchange itself—not just the material resources
such interactions returned—shaped their perceptions of recovery. For example, Sophia described how regularly spending time with local friends and having a steady stream of company from visitors helped to offset the stress associated with trying to salvage her home:

*I have a huge bunch of friends that have stood by me amazingly. So that's been a great comfort. And their concern—they're concerned. I still go out for happy hour on Friday night...Since the flood, I've had 30 people come and spend the night with me—just friends from high school, friends from town, friends that have stayed with me and want to check on me... They've been a big support, too. To have people still want to come. My friends, my son's friends, even my [ex-partner], his friends have come and stayed with me. Visiting for other reasons, or going through, and stay with me. That's been a big comfort... It makes me feel good.*

Social interaction and the perception of support served as important coping mechanisms that helped Sophia manage the stress of lingering uncertainty about the fate of her home and brought a sense of normalcy to her life. While the size of their networks varied, seniors tended to view social engagement as a mechanism for creating a sense of stability in the midst of disruption. Research on mental health outcomes among older adults in the post-disaster period suggest that such activities were important means of meeting expressive needs (Watanabe et al. 2004; Matsuyama et al. 2016). Descriptions of social support provided by those who were able to more or less sustain their social networks stood in sharp contrast to the narratives of those whose displacement and other contextual circumstances led to increased social isolation.

**“This Neighborhood Doesn’t Neighbor”: Navigating Social Life in the Aftermath of Displacement**

Older adults who were displaced by the 2013 floods reported a range of outcomes, from minimal disruption to total devastation. While the duration and conditions surrounding their relocation factored into residents’ considerations, the accessibility of social networks also played a role in mediating the degree of disruption. Displacement yielded more negative consequences
when it introduced significant barriers to social interaction. Displaced mobile home residents from Lyons suffered some of the most significant disruptions of this nature. Many of those seniors had lived in the community for decades, and their social worlds mostly revolved around life in the town.

Lucille, an 81-year-old former Lyons mobile home resident who was forced to relocate in Longmont, was still reeling from the loss of her community two years after the floods. She explained that her social networks and those of her husband had been an important part of their lives prior to the disaster, and that their proximity to social spaces had enabled them to live comfortably before the flood despite modest material resources.

We had what they call the [group name redacted], which was the seniors Lyons, and we could participate in their lunches and we had church suppers and we had our favorite restaurant. We went for coffee and met with friends, and we had lots of friends in Lyons. We had everything there, you know, everything we wanted. We came to Longmont to do groceries and to go to doctors, but we our social life was in Lyons... Our mobile home had everything we needed. We didn’t need anything else. We had everything that you’d need for comfort in life, you know, within our circumstances, we had everything, we didn’t need anything.

However, that situation changed abruptly after the flood:

[After the flood] we lost our whole social life – I mean our whole social network is gone, everybody scattered everywhere... You’ve gotta realize everybody scattered everywhere, [some out of state]. So we don’t have that base that we had in Lyons and –the other people that lived in our mobile home park, they’re scattered, and I have tried to keep in touch with some of them, and I’ve called, left messages, they don’t return my calls. You know, they’ve got their own concerns and they’re trying to put their lives back together so it’s just –almost more than a lot of people can do, you know. You just can’t keep up with people, because there’s so much that has to be done.

And that’s what I think makes it so hard for a lot of seniors, because they’ve lost so much and then they have to move into a different area where they don’t know anyone. You feel like you’re just completely boxed in, you know, you just don’t know what to do, or where—because just your everyday life is a constant thing that you have to be in control of, so you don’t you don’t have the time to reach out [to new people]. We’ve met a few people at our restaurant we like here, our little café, but they don’t, they don’t call you or visit with you or say “come and visit with us,” they’re just acquaintances. That’s acquaintances to me. A friend is somebody who can reach out and maybe not, like I said, help, but just a visit. We’ve got one neighbor across the street that’s
Lucille and her husband had struggled to rebuild their lives in the aftermath of the floods. While they eventually found another mobile home, their access to transportation was limited, so they could rarely return to Lyons to see the few contacts who remained. This geographic separation from the community was further compounded by the fact that the majority of their friends had scattered over long distances after the floods and had also experienced significant losses. Although many of the problems that confronted Lucille and her husband stemmed from insufficient financial resources, she placed primacy on the loss of their social connections, as I describe in greater detail in Chapter 6. Narratives such as these highlight the ways in which severe disruptions to social networks can have an even more devastating impact than material losses.

In contrast, seniors who were still able to maintain their relationships and engage in social activities on a more regular basis during their displacement generally found social life to be more manageable. For example, one Jamestown resident described finding comfort in regularly attending get-togethers with her community of “expats” in Longmont. Others explained that socializing with friends located outside of their communities provided an escape from their broken community environments. For example, Lorne, a 68-year old Lyons resident, described how visiting friends outside of the town provided an escape:

And we actually had a lot of fun. [our friends] kept inviting us for dinner. We’d been working on the house all day and they’d say, "Well come on over, we’ve made extra food." They were so hospitable and it made it so much easier...The other part was having a place that you can get away from the flood and not see it, come home at night and not smell it, not have to track it up on your shoes every time you walk through the house. Just to be out of it with people that had clean silverware and [laughter] clean rugs in their house and they invited us in with open arms. It had that sense that there was still some stability in the world. If we were holed up in Lyons during the flood, we’d be nutty. We’d be more crazy. It really helped to have a get-away.
In each of these cases, interviewees described their interactions with friends as actual or potential outlets for stress associated with disruption caused by the floods. While the functions that such interactions served (for example, as opportunities for commiseration or distraction) varied, seniors’ expressive actions supported greater emotional balance and life satisfaction during the recovery process. The loss of such opportunities, on the other hand, added to seniors’ distress. It was difficult for those whose entire social networks were devastated by flood impacts to maintain social connections. Moreover, it was harder for these individuals to develop new friendships, and some felt that they would simply never regain the quality of social support that they’d had prior to the floods.

**Collective Narratives as a Heuristic for Recovery**

In their study of recovery and rebuilding efforts in St. Bernard Parish following Hurricane Katrina, Chamlee-Wright and Storr (2011) argue that community members’ collective narratives provided a lens into interpretive schema that shaped individual recovery strategies. They find that these narratives reinforced a sense of shared identity rooted in notions of self-reliance, cultural uniqueness, and local capacity, which encouraged residents to invest in their return rather than settling elsewhere.\(^{36}\) I contend that collective narratives in Jamestown and Lyons can be similarly examined to shed light on the factors that shaped older residents’ flood experiences and recovery process. While the two communities are culturally distinct, the

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\(^{36}\) This is not to say that such narratives were solely responsible for recovery and rebuilding activity. Favorable conditions such as access to resources, support from local government, and a highly skilled population complemented shared beliefs to enhance the effectiveness of recovery efforts at the individual and community levels (Chamlee-Wright 2010).
structure of community life in each supported the creation of these narratives as organizing principles for residents’ approach to flood recovery.

Boulder County seniors’ accounts of flood experiences varied across geographic and social environments. Narratives provided by residents from the cities (Boulder and Longmont) referenced individual friend groups, neighborhoods, or other social networks as key supports that helped them through adversity. In contrast, while town (Jamestown and Lyons) residents also relied on specific interpersonal or group connections, they tended to situate their experiences within those of the broader community in more significant ways. The social fabric of these small, close-knit towns served as a distinct cultural backdrop for town seniors’ accounts in ways that were not reflected in my interviews with their more urban counterparts. Below I explore the ways in which community-focused narratives were manifested in Jamestown elders’ accounts of flood impacts and recovery.37 Jamestown’s elders emphasized the disaster as a collective experience; spoke of their community environment as being culturally distinct; and attributed their resilience to a shared identity as hearty, independent types who could handle adversity.

“We’re Quirky. We're Somewhat Feral. We're Very Independent.”: Jamestown’s Flood Narratives

Older adults in Jamestown tended to describe their flood experiences in terms of collective struggle rather than personal challenges, highlighting the significance of community cohesion. Their accounts stressed the ways in which the community’s distinct character had shaped residents’ response to the floods, and how the demands of mountain living both attracted and required more resilient and self-reliant people. These narratives were reproduced in the

37 These dynamics manifested most consistently in the narratives of seniors from Jamestown; thus, my analysis at present is limited to this community.
stories that residents frequently invoked to illustrate what it meant to experience the floods as a “Jimtowner.” The town’s evacuation story provides one such example.

Elders recalled how the town came together in the two days before the evacuation, with people “just doing what needed to be done.” Residents housed others whose homes sat dangerously close to raging creeks, brought supplies to the school, which served as a makeshift evacuation center, and otherwise supported one another according to their ability. Upon unexpectedly receiving notice that the entire town would be evacuated, many residents were reluctant or unwilling to leave. Interviewees generally conceded that the situation in town was untenable over the long term, and several were in fact quite relieved to make this exit. Yet many nonetheless felt that the evacuation order had stripped the community of its agency. Martha described this sentiment:

*We got word that they were going to evacuate the elderly, or the sick, or infirm, or infants, or whoever. And then all of a sudden it was, "Hurry up, you have to get out now." And that actually was really significant for our community because we were in the process of handing it, and we were interrupted in that process, and that was really serious for us.*

Illustrating the symbolic importance of this event, the town’s mayor shared a similar account in an oral history recording:

*We had ourselves pretty well organized. People were prepared to be here for days. And I think, kind of secretly looking forward to it [chuckles]. Everything was going good. We were kind of enjoying ourselves, enjoying our time with our community. Everybody was working together. And I think that mind-shift of “Oh, God, I don’t want to go down and end up in a big evacuation center down in Boulder or Longmont” was just really unappealing to them. And quite frightening for some people (Schoedinger 2013).*

Some residents simply refused to follow official guidance. Approximately 25 Jamestown residents stayed behind despite the evacuation order or returned shortly thereafter, several of them elders. Calvin, a resident in his 70s, described his reaction to this directive:
The power lines were down and laying in the road, and of course there was no electricity or telephone. And the helicopters were coming in, taking people out. The State, the authorities wanted everybody to leave and told me I had to leave. I grinned and nodded my head and went home. Mountain people are sometimes resistant to being told what to do. I don't know whether I got that way living in the mountains; I think I live in the mountains because I was already that way.

In addition to reinforcing narratives of self-reliance and independence, which I discuss further below, the evacuation story highlighted how residents had banded together to look out for their own. This concept of community support and cohesion ran throughout elders’ accounts of the floods. To further illustrate the importance of these concept for Jimtowners, Ed, a resident in his 70s, described an exchange that took place at one of the first post-evacuation community meetings:

The first one or two [meetings]...were really moving and heartwarming because the whole town was in a county courthouse. It was like somebody blew us up and scattered us to the four winds around Boulder and Weld County and neighboring counties. Seeing everybody come together was like families. It was really—probably meant more than any information we were given. It was one of the early meetings, I don't know if it was the first one, that symbolizes that—FEMA got involved really early on. I didn't know who was who, just [FEMA representatives] showing up. Kind of figured out afterwards that one contingent of FEMA that was at these meetings were trying to, pretty early-on, get us to look ahead as a community and plan the future. Like, everybody's still in shock, first of all. We were all in the courthouse and they had a facilitator guy...He said, "What we're going to do is break you up into these groups, and then discuss in groups whatever it is you want us to discuss. Then we'll all come back together and we'll share what the groups came up with." There was a silence. [Name redacted] stood up in tears and she said—I'm emotional just thinking about it, but she said, "You're not break us up again." She said, "It's ridiculous, we've just been pulled apart. We're not going to do that; I'm not going to do that." She started a revolution there and the FEMA guys were trying to push back on it, and then they just finally said, "Okay, we'll just have this as a group conversation."

The primacy of community was similarly reflected in residents’ descriptions of their own personal flood impacts. For example, recalling her initial concerns in the immediate aftermath of the floods, Jean quipped:

The thing I was worried about is just how we're going to get back together as a town. Some people, it was heartbreaking for them to lose their house, and I don't know if I just don't have
that much attachment to a home, but it didn't hit me as hard as it hit other people. I kept thinking, "Oh, good, I don't have to worry about getting the wood in [chuckles], getting more propane. Oh, good, all that paperwork, it went downstream, good [chuckles]."

Jean’s comments were made partially in jest, and she acknowledged in the course of our conversation that the process required to address the damage to her home had created genuine stress and frustration. Yet the presentation of these issues as secondary to her concern about putting the community back together was in many ways consistent with other elders’ comments. While some residents chose to permanently relocate elsewhere following their displacement, the majority did not, and shared narratives of community cohesion and attachment ran throughout interviewees’ discussions about the recovery process. This collective bond in turn fostered mutual support and collaboration.

Jamestown’s distinct cultural milieu also emerged as a central concept in elders’ thinking about flood recovery. Descriptions of the town’s uniqueness were intertwined with narratives of community cohesion as an explanation for the common thread that drew residents together. These narratives emphasized residents’ sense of belonging in a social environment that could not be replicated elsewhere, thereby reinforcing residents’ will to return home. Mara observed that although mountain people lived in these remote areas precisely because they did not quite “fit” in other communities, these common characteristics are what galvanized collective action in response to the floods:

A fair amount of that energy happened because of the flood. A fair amount of that energy happened because people recognized that most of us moved up here, or live here, or continue to live here because we are kind of recluses and misfits. And we’re not overwhelmingly social, but it made it kind of clear that really, no man is an island...I think that was a—I don’t think that anybody ever expresses that as a conscious motivation for getting more involved, but I think that's an unconscious motivator.
The qualities that contributed to Jamestown’s “unique mountain character”\textsuperscript{38} were seen as extending from the kinds of people who were attracted to the community: hearty, independent, “feral” types who could withstand more than a few knocks. The qualities embedded within Jimtowners’ shared narratives are reflected in a March 2016 community survey, from which the word cloud below was generated based on residents’ volunteered responses (Jamestown Speaks 2016).

These characteristics had been part of a shared understanding prior to the disaster. Jimtowners’ intense flood experience and the collaboration that it had fostered thus enhanced interviewees’ sense of interconnectedness in greater depth than could be attributed to the therapeutic community effect alone. Moreover, these themes were reinforced by feedback from external parties working with the community. For example, a FEMA agent who had become

\footnotesize{\textsuperscript{38} One resident attributed this phrase to the FEMA agent quoted below.}
quite respected and well known within the community posted the following message on the
town’s discussion board just a few weeks after the flood:

*i cant express enough how helpful everyone has been in tracking people down....this community
is a model of the way resources & people should come together after an event of this
magnitude...i am truly humbled by the spirit of this community!*

Upon receiving notice of his imminent departure, he re-stated these sentiments:

*tomorrow will be my last day in jimtown i am moving to another area for a different project, you
guys have been awesome.....they will be sending several other inspectors in to finish the
inspections [name redacted] has already arrived and hes a great inspector hope he has the same
experience i have with you folks!!!*

Several interviewees recalled exchanges with or posts made by this particular agent, both as an
affirmation of residents’ “unique mountain culture” and as a reflection of how the community’s
internal cohesion had made it stand out.

Statements such as those above demonstrate that, while the culture of Jamestown could
be somewhat insular and in some respects fostered suspicion of outsiders—particularly
representatives of the federal government—these characteristics had also become more malleable
in the face of the town’s overwhelming need. This evolution was even more strongly reflected in
stories about outside volunteer groups that supported Jamestown. Nearly every interviewee
spoke of their gratitude for the assistance that these groups had provided to the community. Two
groups in particular, the Mennonite Disaster Service (MDS) and the Southern Baptist Disaster
Relief (SBDR), made tremendous contributions to the recovery effort, doing heavy cleanup and
rebuilding projects. In addition to the tremendous workload that these groups undertook, their
volunteers worked in ways that were compassionate and compatible with local values. For
example, the SBDR volunteers engaged residents who remained in the town shortly after the
floods and worked alongside them as collaborators rather than dismissing them as victims,
appealing to Jimtowners’ proactive spirit. Seniors who stayed behind or returned after roads had reopened worked alongside this group, developing bonds anchored in mutual respect and appreciation.

Moreover, a number of volunteers remained in Jamestown long enough or returned frequently enough to develop strong ties of their own with residents, further aligning with values of cohesion and solidarity. Several interviewees recalled that they had been surprised at the rapport they were able to develop, given the groups’ religious orientations in a community where many residents were non-religious. Yet, tight bonds and mutual respect trumped these differences. In fact, several spoke of the volunteers as close friends. Furthermore, these groups were seen as having provided critical support in Jamestown’s time of need, solidifying both their presence in the community’s shared stories and residents’ willingness to embrace them.

Narratives emphasizing residents’ collective identity also shaped elders’ descriptions of their flood experiences. “Mountain Strong” had become a local mantra in the months following the floods, emphasizing Jimtowners’ self-reliance and resilience. This narrative was crystalized in a symbolic moment: the return of Shadow, a cat that had belonged to deceased town patriarch Joey Howlett, 40 days after the floods. The cat was presumed killed in the landslide that had taken Howlett’s life, but she somehow survived in the wilderness in spite of a compound fracture that partially amputated her leg (Brennan 2013). Shadow’s reappearance became a symbol of hope and strength for the community. Calvin described the collective impact of this experience:

I didn’t find Shadow, but I was there 15 minutes later. And the day Shadow came back—nobody knows where she was – she had a great deal to say. And I wish I could understand cat because I’d love to hear Shadow’s story, because there’s too many wild critters around here for a cat to be very likely to survive in the wild…I have no idea how Shadow survived all that time. Anyway, what it did for the morale, what it did for the people in town the day Shadow came back, was just—I mean, everybody was calling everybody else. And now [surrogate owner has] got her
and he takes good care of her, and she is the only animal who's allowed in the Merc. But Shadow can come in the Merc anytime she wants to.

In addition to providing unexpected joy during a time of grief and disruption, Shadow’s story of survival symbolized residents’ resolve to “roll with the punches.”

Narratives of strength and resilience manifested themselves in elders’ descriptions of disaster impacts, recovery, and adversity more broadly. The majority of these participants described the flood as a challenge which they had dealt with and moved on, consistent with the “mountain strong” identity. For example, Ethel, a Jimtowner in her 70s, summarized this sense of resolve and even optimism:

We’re thankful we’re okay. Rather than, "Poor me. Everything’s gone." No, that didn’t cross our minds...I’ve lived all these years with plenty of things. I don’t need things. I’m alive and I have my health... Everything’s going to be all right. Never a doubt that, "Oh, poor me," or, "What’s going to happen now?" or anything. I was just, "This happened. Well, it's going to end up being better than it was before."

Dean, a resident in his 70s, expressed a similar perspective:

Well I was in the army [for several years]. I’m a vet. And compared to combat, it wasn’t much to shout about. I mean, it was just one of those things that happens.

The severity of flood impacts to particular households further reinforced residents’ tendency to discount the challenges they had experienced. The fact that Jamestown’s social network structure was small and densely connected meant that most residents knew or were at least familiar with those who had lost their homes entirely in the disaster. Interviewees’ descriptions of their own flood-related losses were often embedded in and contrasted with these other stories. This awareness was strongly reflected in statements made by seniors whose homes

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39 The “Merc” is how Jimtowners colloquially reference the Jamestown Mercantile, a local café that serves as a gathering space for many in the community.
did not sustain significant damage but who were nonetheless affected by the disaster in other ways.

For example, Charlene, a Jimtowner in her 70s, described her experience with the floods as one in which she had come out “smelling like a rose,” or hardly affected, while others had suffered tremendously. Yet she also acknowledged that the rose had perhaps “lost a few petals,” as insufficient FEMA assistance left her $10,000 in credit card debt incurred simply to meet basic needs during her displacement. While subsequent assistance from the county’s long-term flood recovery group ultimately assisted her in recouping slightly less than half this amount, she had to draw down a significant portion of her retirement savings in the meantime to pay this cost, along with the medical bills that she had also incurred during this time, leaving her vulnerable to future financial shocks. As Charlene’s modest income from social security provided little opportunity to replenish this financial cushion, she remained much closer to the margin of financial insolvency in the event of a major disruption. However, like many elders in this community, she expressed a palpable distaste for the notion of victimhood, choosing instead to cope with challenges to the best of her ability rather than dwell on the difficulties she had encountered as a result of the floods.

By most accounts, Jamestown’s elders were truly resilient. Interviewees were generally circumspect about their experiences, and while describing flood impacts in terms of varying degrees of inconvenience, would also articulate coherent reasons why material losses were genuinely secondary to other concerns. Yet others struggled under the weight of the narratives that had uplifted the community. Over time, the “Mountain Strong” narrative came to leave little room for the expression of different views. While shared experiences of emotion, shock, and even trauma partially undergirded residents’ common bond in the immediate aftermath of the
floods, consistent with the therapeutic community perspective, things began to shift as the town regained a sense of normalcy.

Older Jimtowners who experienced prolonged psychological disruption had difficulty reconciling this disjuncture with the “mountain strong” identity. Further, reluctance to acknowledge their struggles may have kept some residents from seeking help when they needed it. Two years after the disaster and beyond, a number of residents were clearly still grappling with these tensions. As an example, in the course of less than five minutes one interviewee went from remarking that his complaints about financial stressors were merely because “it’s nice to have money” to disclosing that he had been struggling with a drinking problem since the floods. Several other elders similarly reported either directly self-medicating with controlled substances or observing that drug and alcohol abuse in the community had increased as a result of the disaster.

Discourses emphasizing independence and resilience appeared to reinforce some elders’ reluctance to acknowledge what they viewed as whining or signs of weakness. Living in a community in which so many appeared to have coped with the floods and moved on from their experiences left those who had not done so feeling conflicted. Indeed, community members were not always supportive of expressions that ran contrary to dominant narratives. For example, in reflecting on other residents’ public comments about flood-related trauma, Alvin, a Jamestown resident in his 70s, stated:

God, I get so upset and shouldn’t because I should feel sorry for them, and I do. But they take so many little things that happened almost now three years ago during the flood, and it’s still dragging them down. I wish somebody could say, “Hey look, you can’t do anything about it.”

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40 This is not to deny that many of Jamestown’s elders had, in fact, been resilient to flood impacts. The majority of my research participants from this community could be characterized as having made significant progress in recovery.
Alvin and community members expressing similar sentiments acknowledged that some residents had undergone legitimate struggles stemming from traumatic experiences, but nonetheless felt that a few were essentially crying over spilled milk despite the fact that others had lost everything. On the other hand, a few seniors reported feeling uncomfortable discussing ongoing emotional challenges extending from the flood for fear of having others diminish their concerns. Several interviewees shared anecdotes about residents who had relocated out of the community because the trauma endured from the floods had been too overwhelming, and none challenged these reactions due to the nature of those residents’ circumstances. Beyond extreme examples, however, the question of whose experiences and lingering concerns were legitimate remained contested.

Collective narratives that underpinned individual and collective flood recovery efforts in Jamestown ran throughout most interviewees’ accounts. Community cohesion fostered a sense of support that that nearly all interviewees cited as part of their experience. Descriptions of the town’s unique cultural landscape reflected a sense of belonging as well as a willingness to evolve to meet emergent needs. Shared identity rooted in resilience and independence helped many cope and adapt to flood-related losses. Yet the dark side of such narratives was their inherent exclusion of experiences that were incompatible with these themes. While acknowledging other scholars’ cautions about the negative aspects of social capital, Chamlee-Wright and Storr (2011) describe collective narratives as a form of social capital that facilitates community rebound. However, in building upon their work, I find support for Aldrich’s (2012) suggestion that it is a “Janus-faced” resource.
Summary

This chapter presented key themes drawn from older adults’ experiences with the 2013 floods and the disaster recovery process. Financial pressures were among the most significant challenges these individuals encountered, primarily because they required interaction with disaster assistance programs that created a secondary source of stress for most participants. Uncertainty related to bureaucratic decision-making processes served as an additional barrier to recovery for some seniors. Slow-moving timelines associated with these approvals and the release of funds held recovery in suspension and, in some cases, worsened financial problems that further taxed seniors’ ability to move forward. Narratives about elders’ social lives shed light on the ways in which they used social engagement to cope with such challenges; however, they also revealed potential long-term consequences of displacement among those whose close support networks were similarly devastated. Finally, the social environment in Jamestown led to the deployment of collective narratives that guided older residents’ approaches to recovery and shaped the ways in which they assigned meaning to flood-related challenges.
CHAPTER VI
STRUCTURAL INFLUENCES ON SOCIAL CAPITAL

Introduction

The two previous chapters discussed the role of senior-serving organizations in connecting older adults with needed resources in the aftermath of disaster and explored factors that seniors themselves identified as having shaped their disaster recovery process. These analyses illuminated the value of social capital as a critical resource that enabled elders to meet a range of needs in the aftermath of the 2013 floods. Yet they also highlighted disparities in either access to social capital or the quality of “return on investment” in social connections. In this chapter I situate my discussion of social capital within a broader structural context.

Revisiting my theoretical framework, I maintain that explorations of social capital must be expanded to consider the ways in which structural forces shape both disaster impacts and social responses. Pelling and High (2005:314) note that social capital theory provides “a tool that can help in revealing the power dynamics that unfold between social actors in the (re)construction of social inequality and risk.” The attention that social capital research draws to relational and networked spaces, they argue, creates new opportunities for examining the complexity of social systems and the distribution of power within them. The vulnerability perspective serves to anchor such analyses by discussing agency within the political economy of the research setting.
Social Relations, Structures of Domination, and Implications for Disaster Recovery

In this dissertation, I argue that activating social networks and utilizing social capital are important means through which older adults take an active role in responding to disaster. My research aims to engage members of this population to better understand how these groups experience and respond to disaster impacts. However, I also contend that economic, political, and social conditions play a significant role in shaping both seniors’ access to social capital and the effectiveness with which they are able to deploy it. Thus, while understanding interviewees’ subjective experiences is a key goal of this project, my analyses are also concerned with how elders negotiate both structure and agency in the context of disaster.

Wisner et al. (2004) argue that disaster risk and coping capacity at the household level, while moderated by social protections and adaptive capacity, are largely shaped by the same social relations and scalar structures of domination that influence access to resources in daily life. Extending this line of reasoning to the post-disaster setting, Moore et al. (2004) state that in spite of the unity and cohesion that can occur during the emergency response phase of disasters, inequality becomes re-entrenched over time and ultimately reproduces pre-disaster social divisions over the longer term. Some scholars argue that these dynamics are a function of the structure of social life within communities more than matters of social status or access to resources per se. For example, as detailed in Chapter 2, in Chamelee-Wright’s (2010) study of the Mary Queen of Vietnam community of New Orleans, she concludes that the community’s capacity for collective action, rather than simply economic conditions, supported its rapid recovery. In particular, she finds that residents’ ability to activate a diverse array of bonding and bridging ties enabled them to successfully advocate for the community and support its timely return.
Many of the older adults and other relevant actors in my sample leveraged diverse forms of social capital to access resources for coping with and recovering from disaster impacts following the 2013 floods. Nevertheless, my findings suggest that outcomes of these actions were moderated by larger structures of domination and access to resources. Below I present a case study of the contentious 2015 battle over affordable housing in the hard-hit town of Lyons. In doing so, I shed light on the complex ways in which status, political power, and social capital interacted to shape long-term recovery outcomes among older adults. I begin by summarizing the issues surrounding the displacement of older mobile home residents following the floods, the collective action that mobilized around plans to support their return, and the ultimate failure of these efforts. Next, I deconstruct the factors that undermined these activities to explain how social context shapes the “return on investment” in social capital. I then present narratives from seniors representing the displaced population to illustrate how displacement and community conflict shaped their recovery.

**Affordable Housing and Political Conflict in Lyons, Colorado**

Utility services were restored in Lyons over several weeks and months following the total evacuation triggered by the 2013 floods. As residents steadily streamed back into the area, the community showed overwhelming resolve to rebuild together. Existing and emergent leaders quickly began coordinating collective action, skillfully repurposing the town’s strong social infrastructure in support of recovery goals. To provide a few examples: Community leaders stepped up to create an impressive organizational system for requesting and assigning volunteer labor that remains active nearly three years later. The local community foundation, which prior to the floods had managed an annual budget of only $50,000, reorganized to raise and distribute
$1,000,000 to residents within a span of 90 days. Local businesses supported one another and individual residents with grants, supplies, and any material resources that could be spared to support the community’s return. The phrase “We’ve Got Grit” became a local rallying cry that undergirded the town’s collective identity and will to recover in the face of adversity (Bunch 2013). The broader Lyons community came roaring back in the months after the floods thanks to a collaborative effort that was largely deemed a success. Approximately 80 percent of community residents had returned by the end of 2013, and this number increased to 95 percent by the end of 2014.

**Something Missing: Lyons’s Displaced Mobile Home Occupants**

Despite the progress outlined above, a cadre of long-time residents remained missing from the recovery process. Although they, too, had shared in the original collective vision of the town’s resurrection, many were unable to finance a return to Lyons due to its pricey housing market (Burness 2016). These individuals struggled to reconnect with their community. The floods had decimated two mobile home parks, damaging or destroying more than 50 units and scattering their occupants across Colorado’s Front Range. Prior to the floods, these parks overwhelmingly served the town’s low income households, and 75% of their homes had been populated by individuals aged 65 years or older (Rumbach and Gossard 2015). As time passed and the town’s recovery rocketed onward, this group began to feel increasingly left behind (Flemming 2014).

Several obstacles stood in the way of displaced mobile home residents’ efforts to return to Lyons. For most, limited financial resources had made buying or renting other homes unfeasible even before the floods. Demand for housing only increased afterward, further driving up the price of housing in the county’s upwardly trending market. With the future of affordable
housing options uncertain, lower-income residents were forced to choose between either remaining in a state of limbo with the hope that a solution would be forthcoming or moving forward and trying to start over elsewhere.

While a comprehensive survey of displaced seniors’ place attachment falls outside the scope of this research, it is telling that the majority of the 99 households that remained uprooted as of early 2015 had held out for more than a year, avoiding permanent resettlement in the interest of returning to the town they thought of as home (Flemming and Jane 2015). However, this group faced a number of obstacles. First, the scale of the region’s flood-induced diaspora left these residents scattered wherever they could find temporary housing across a wide geographic area. Further complicating their situation, increased financial pressures and other disaster-related stressors left them with little capacity or energy to meet, coordinate efforts, and collectively advocate for solutions. They also lacked the technical expertise to identify options and unify around a proposed solution. However, key groups within the town were committed to assisting with these needs, and they strove to coordinate an advocacy network that could produce a viable plan. In the next section I explore collective efforts to resettle the town’s low-income elders and the political struggles that ultimately obstructed the realization of this goal.41

Friends and Neighbors in a Time of Need: Advocacy for Affordable Housing

A team of town staff, community volunteers, and local officials coalesced in the months following the floods to tackle housing recovery planning needs. The town reached out to professional planners to assess needs and to create a strategy for reviewing potential housing

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41 Although these activities were not initially defined as being in the interests of seniors per se, older adults constituted the primary beneficiaries due to their overrepresentation among mobile home and low-income residents. Moreover, these individuals were promoted among the “faces” of displaced community members. Thus, while this advocacy was not reserved for elders, it was largely undertaken on their behalf.
sites, funding options, and planning needs. In an effort to help low-income residents regain some personal stability and give them a greater voice in flood recovery planning, a local nonprofit organization, the Lyons Emergency Assistance Fund (LEAF), initiated a comprehensive strategy that channeled an array of resources into planning and advocating on their behalf. This organization appointed a project manager to assist residents in articulating their needs and making inquiries with disaster assistance organizations and town officials. It also hired a case manager as an advocate to assist residents with basic needs that were not covered by disaster relief funds. Additionally, it commissioned a consultant to analyze the feasibility of future mobile home residences and alternative options (Lyons Emergency Assistance Fund 2014; Bryen 2014a).

As the planning process began to solidify into concrete options the town obtained a federal grant to hire a planning team tasked with supporting housing recovery and moving forward with proposed solutions. Shortly thereafter, a collaborative consisting of architecture and planning firms, consultant groups, and the county housing authority initiated efforts to reach out to residents and request input on proposed replacement housing. This group held public meetings, launched an internet campaign, and provided support to the displaced residents’ advocate in communicating their desire to return home, an effort that required substantial bridging and linking capacity. These coordinated efforts helped to secure a total of $26.8 million in grants, private equity, and loans to build affordable replacement housing intended to target displaced residents (Lyons Housing Collaborative 2016).

A broad array of organizations, residents, and officials had mobilized on behalf of the town’s missing households. The network coalescing around their plight brought in technical expertise, social services, funding, and other services to link displaced residents with
mechanisms for returning home and rebuilding their lives. By most accounts, these efforts showcased exactly the kinds of ties and supports that social capital scholars have described as being critical for recovery, particularly for less-advantaged groups. Among these are: bridging and linking networks, tangible resources, nonprofit organization involvement, and political backing (Elliott et al. 2010; Hawkins and Maurer 2010; Aldrich 2011). Yet as I explain below, these efforts were hampered by a number of challenges.

**Sacred Ground: The Bohn Park Vote**

In early 2015, after sorting through and paring down options, the town released a plan to build an affordable housing development that would replace the two mobile home parks and offer a realistic path home for displaced residents. Its planners opted to use land that the town already owned, about six acres of a 25-acre parcel known as Bohn Park, in order to avoid additional delays that would have been introduced by attempting to purchase or annex private property. Brad, a member of the town staff, described the process as follows:

*The board of trustees felt pretty confident that based on the town's situation, the vote would go through...Basically the reason why the park was picked was because we had the land, we owned the land, and it was going to fit nicely into the context of the rest of the community. Because when you look at affordable housing, you don't say, "Well, let's take this and put them way out here." If that's done like that, then it just looks really bad...when you're really trying to integrate that diversity into the community. That's one of the goals of affordable housing, low-to-moderate-income housing. So, the location of this six acres was adjacent to the neighborhood that was hit pretty badly during the flood. Even though it wasn't a for-sale type unit, it was all going to be rental units except for the six [Habitat for Humanity] homes. They were going to be rent controlled. And they were going to be permanently affordable.*

In the early months after this plan was first proposed, a group of residents formed in opposition to the use of parkland. However, the town’s Board of Trustees and other supporters nonetheless expected that the project would receive widespread support, consistent with the community’s prior displays of cohesion. Assuming that any local opposition was rooted in
concern and lack of understanding, the housing collaborative and other advocates invested significant resources into engaging and educating Lyons residents. They held meetings, developed a “frequently asked questions” document with nearly 150 items focusing on different aspects of the plan, delivered presentations, and maintained a strong internet presence to explain the process and defuse concerns (Lyons Housing Collaborative 2015; Kuchenmeister 2015). Yet contrary to proponents’ expectations, voters roundly rejected the initiative. With the highest voter turnout in the town’s history, the affordable housing plan failed by a margin of 614 against versus 498 in favor. Despite this powerful show of support in favor of the measure, the town’s displaced residents lacked the political weight needed to cross the needed threshold of voter approval. Ironically, many of those whose fate was being determined could not vote in the election due to their displacement.42

To understand how these issues unfolded, it is important to discuss how the affordable housing debate was constructed. Two campaigns had formed in the months leading up to the vote. An opposition group known as Save Our Parks and Open Space (SOPOS), led by a number of prominent and influential residents, argued that the proposition required an unacceptable sacrifice. With everything they had lost to the flood, leaders stated, it was unfair to ask them to also give up parkland (KGNU 2015). In an interview with a local newspaper, members of SOPOS argued that Lyons’s parks and open space land “defines the soul of who we are, and we really want to keep that” (Bryen 2014b). Bohn Park, they argued, was a collective resource that could not be sacrificed for short-term goals.

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42 Former residents who maintained a post office box in town could vote; however, this option created an additional expense for households that were struggling to stay afloat financially, and many either did not know about this option or could not afford the expense.
The group also vocally opposed the involvement of the county housing authority in recovery planning, capitalizing on long-standing resentment of what many locals saw as the county government’s tendency to meddle, overreach, and hamstring local autonomy. Suspicion of the county undergirded the group’s public statements questioning whether the planned units would even be occupied by displaced residents and speculation that outsiders seeking HUD low-income Section Eight housing might end up filling them instead. The opposition campaign discounted the town’s and county’s pledges to prioritize those who had been forced out by the floods and dismissed as inadequate the LEAF advocates’ reports that most displaced individuals desired to return to Lyons. Articulating these doubts, SOPOS representatives were quoted in a local newspaper as stating: "We have been presented with anecdotal information about displaced residents who say they want to come back, but is it right to base this important vote on anecdotes alone?" (Burness 2015a).

Finally, countering officials’ statements that they had examined over 40 other options before concluding that the Bohn Park plan was the most feasible way forward, SOPOS representatives argued that there were nonetheless better options the town had not considered. One vocal opponent proposed an alternative development, offering to purchase the land himself and work with the town to develop it (Burness 2015). Although this proposed project would only support six units as opposed to the estimated 66 units envisioned in the town’s plan, it was argued that this was but one example of a range of more appropriate options. SOPOS representatives argued that they wanted to bring displaced residents back, but not at the expense of the town’s treasured resources.

The housing collaborative and others in favor of the Bohn Park plan accused the opposition of NIMBYism and intentionally spreading misinformation, alleging that SOPOS
members had launched a campaign of lies to confuse voters with alarmist rhetoric. They further claimed that opposition to the plan reflected an elitist agenda to keep working class households out of town, pointing to the value it placed in “parks over people.” Invoking Lyons’s unique artistic culture, they maintained that the displaced residents were a critical component of the social milieu that made the town desirable to the very people who had priced them out. Without this diversity, they argued, the town risked becoming a mono-cultural bedroom community whose main function was serving as an appendage to Boulder (Burness 2015). Monika, a 62-year-old resident who had advocated in favor of the plan, recounted these arguments:

The rich people were saying... “you don’t deserve to be in Lyons.” The people who lost their homes were our diversity. They were overwhelmingly our artists, our musicians, and our elderly. Not a hundred percent, but that is where a lot of them...there's definitely a feeling of, "I never got in your way. Why do you hate me?" And I see that somehow with the elders – I'm thinking of some of them very specifically – lived here all their lives. These new people come in who can afford the $500,000 and $700,000 houses. “And you don't want me here, you never knew I lived here, but now you're saying that somehow I made a problem, or would make a problem.”

Highlighting the fact that the town would be creating additional park space as a requirement of federal post-disaster home buyout programs, advocates argued that there would be a net gain in public land even after accounting for the portion of Bohn Park that would be developed. As part of a campaign to call attention to the plight of the displaced, promotional materials invoked the difficulties faced by seniors. These materials provided figures about projected increases in the number of older adults needing rental housing, the challenges many faced due to fixed incomes, and the lack of affordable housing alternatives. Most interviewees who had been allied with these efforts stated that they had initially been confident that their efforts would ultimately prove successful, but many became concerned after hearing or reading rhetoric from the other side.

Brad went on to describe how the debate between these factions played out:
One of the things that swayed the vote was a couple of individuals in town who have a strong say and have a lot of money were able to get on Facebook. Facebook chat, clubs, and everything that the town has, there's one called [name redacted], and that—a lot of individuals are on that, are part of that group. I'd say maybe 10% of them actually talk. So people read them, but only 10% of those individuals actually talk. Some of those with the most ability to sway votes and have some of the more—higher level of respect in the town were able to come in and say, "You know what? This is not the best idea. This isn’t a good idea at all. I have better ideas and let me explain to you what they are." And they went through the process of explaining all these different opportunities to bring in housing. And basically told these folks that the way that this was moving forward right now, this project was not the best way. That was about two weeks before the vote occurred and we think that that had a major play in swaying the vote.

Deborah, a 66-year-old Lyons resident who had been in favor of the Bohn Park plan, echoed these claims:

There was this [general community discussion board]. We had to start up [another discussion board], a different page because [general community discussion board] was getting too full of stuff. They’re both administered and don’t allow people tearing down of other people, but I mean it got very personal because, I think, it was personal. And I understand if you live over by Lyons Valley Park, over by the high school, yes, that’s going to have more of an impact on you…but early on, there was a big postcard that came out against using the park space, and that was my first foreshadowing: “There's a lot of money behind this. Someone with big money.” It wasn't just a grassroots [campaign], which in a sense I would've respected more, and I don’t know if any of us really know. There were a few people that were pretty vocal, but I don’t know.

Town officials, the displaced residents’ advocates, and the collaborative behind the project had held public meetings to invite residents’ feedback, and editorials were posted in local newspapers. However, a number of interviewees indicated that much of the public debate over this issue played out over social media. Discussion groups devoted to these matters were private and therefore inaccessible for research purposes; however, interviewee accounts, newspaper articles, and other documentary sources support claims about their content. While it is unclear how many displaced elders followed these online groups, the town’s prior difficulty tracking older residents through such media suggests that these individuals were unlikely to have been

43 Some community stakeholders suggested that most residents discussed the project in quieter, less public exchanges.
engaged through them. Recent data collection efforts involving the town’s older population support this idea. In a 2016 community meeting targeting seniors who remained in Lyons, only 15% indicated that Facebook was a good way to communicate information to them (Boulder County Agency on Aging 2016). Of the residents I interviewed, only one, who lived in town and had been able to return to her home following the evacuation, reported taking part in these conversations.

A few stakeholders speculated that the vote may not have ever passed regardless of the opposition campaign, because the same park space had been a source of contention in the past. One stakeholder recalled a that prior attempt to put a parking lot in the area had also been the subject of intense controversy. In either case, however, the affordable housing proposition was exceptionally divisive. Disagreement about whether it should be implemented left many in Lyons feeling bitter after the vote. As an example of the lingering sensitivity surrounding this matter, two of the seniors I interviewed, both of whom were business owners, requested to discuss the issue off the record despite assurances of confidentiality, anonymous reporting, and the use of pseudonyms. They explained that the subject was still too controversial, even eight and 11 months after the vote. The town was still healing from the painful fight, which had caused many to question the shared identity that had been such a source of pride immediately after the floods. Affirming these lingering tensions, Gretchen, a former elected official, observed:

*The housing on that piece of land became polarized very early and nasty, and it's still nasty. There are other people who were friends who don't talk to each other anymore... People disagreed about something that mattered to both sides, and it hurt to lose that vote. A lot of people said they looked at Lyons differently.*

Although organizations that had backed the plan continued to search for alternative options, representatives described the blow as demoralizing and held that no other solutions could be
created on a timeline that would be feasible for most elders. At the time of this writing more than a year after the rejection of the Bohn Park plan and two-and-a-half years after the floods, no alternative projects are underway. The last viable option, the opposition member’s alternative proposition to build six housing units, was rescinded just before the one-year anniversary of the vote (Burness 2016).

**Social Capital in the Local Setting**

Accounts of civic participation, volunteerism, and other forms of collective social capital suggest that such resources were bountiful in this small community. Moreover, the displaced mobile home-dwelling elders had themselves leveraged a veritable smorgasbord of social capital through the affordable housing campaign. Rather than having to fight the local government, the town had worked to create a viable and reasonably expeditious path toward bringing them home. LEAF, the nonprofit organization advocating on displaced residents’ behalf, assisted in connecting them to social services and other resources in an attempt to ensure that basic needs were met until they could return. A slew of experts and organizations put considerable time and technical expertise into design, stakeholder engagement, and marketing for the project. Advocates had secured tens of millions of dollars in funding. Finally, much—although clearly not enough—of the town was in favor of the plan due to the extraordinary circumstances that had produced it.

Yet the plight of the town’s least advantaged seniors and other low-income groups, while acknowledged by all to be extremely unfortunate, was ultimately not deemed worth the sacrifice of public land. The underlying message that many took away from this decision left them feeling
bitter and discarded. Like a cruel joke, the social cohesion that had characterized the Lyons community transmogrified into a symbolic slap in the face from the perspective of many of those whose fate depended upon it the most. The polarization that developed during the affordable housing battle was in many ways consistent with the “corrosive community” environments more commonly associated with technological disasters (Freudenburg and Jones 1991; Gill and Picou 1998; Picou, Marshall, and Gill 2004). In these cases, processes that unfold in the aftermath of disaster create social divisions that diminish ties within and among social groups and further degrade their potential for collective action. Such conditions, in turn, foster stress and trauma at both the individual and collective levels (Ritchie 2004; Ritchie and Gill 2007). Similarly, in Lyons, conflicts triggered by the affordable housing debate further isolated displaced elders and punctured the bubble of cohesiveness that had enveloped the town. Returning to my central argument, I contend that a range of structural barriers and contextual factors contributed to the Bohn Park plan’s ultimate demise and the social disruption that accompanied it. Below I identify several underlying issues that undergirded the plan’s creation and local opposition.

More Beneath the Surface: Deconstructing the Bohn Park Controversy

The value attached to land in the Town of Lyons was a key element in the struggles faced by flood-affected residents. As noted briefly above, the community was geographically contained by open space, creating a perfect storm of limited supply and sharply increasing demand. In addition to limiting the amount of buildable land, which I address further below, the issue of open space is of interest because of the intrinsic value that it held for some residents. Communities across the county had prioritized the preservation of parks and public land. As

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44 Some properties on the outskirts of town were eligible for annexation, but these were scarce, under private ownership, and not on the market.
evidenced by Lyons’s nickname as the “Double Gateway to the Rockies,” opportunities for nature-based recreation held substantial draw. Further, plentiful open space has been widely promoted among the amenities attractive to a growing number of affluent, health-conscious professionals to area.

Population growth across the entire Front Range region had been steadily trending upward in the years before the floods, supported by investments in information technology, research, and other white collar job sectors (Lang and Muro 2008). Although not entirely clear at the time, this gradual trend was transitioning into a sharp upward spike when the floods occurred. The Denver-Boulder Metro Area, ranked at number 16 on Forbes’s list of 20 fastest-growing cities in 2013, jumped to number six in 2014 (Carlyle 2014; Fortier 2014). This influx created additional sprawl and pushed demand for housing outside of regional population centers at the very time when existing residents found themselves desperate for alternate accommodations.

Matters were made worse by the demise of 20% of the town’s housing stock due to flood damage. Federal buyout programs prohibited the placement of permanent (e.g., residential) structures on lands that had been purchased as a hazard mitigation measure, leaving gaping shells of damaged homes in the years that it took to finalize these sales and then tearing them out completely. These lots were held for potential sale as initiated by each owner, lending credibility to plan opponents’ suggestions that the land gained as a result of buyouts could resemble a patchwork of small parcels that would not replace the 6-acre stretch of parkland proposed for development. Moreover, within just a few months of the disaster, several homes that had been flooded in the working class Confluence neighborhood—one of the most affordable locations in
town—were quickly snatched up by private buyers who could afford to raze, elevate,\textsuperscript{45} and rebuild them. This combination of factors supported the social construction of land as a precious resource within the town’s limits and likely contributed to a scarcity mentality, despite overall gains in publicly owned space.\textsuperscript{46}

The town’s limited institutional capacity and post-flood dependence on federal funding also contributed to challenges associated with the Bohn Park plan. Prior to the flood, the local government consisted of fewer than 15 employees. It possessed little technical expertise relative to that needed to undertake the complex planning efforts that are required in a post-disaster environment. Officials had skillfully leveraged professional connections to obtain support from planning experts at the local and even national levels. Yet there was still a need to increase internal capacity to carry out the final project, which required an injection of federal funds. It was not until December 2014 that the recovery planning staff was expanded by means of a federal grant to assist with an effort that had until then been undertaken with a combination of volunteer labor, contract work, and staff who were assigned primarily to other duties.

The town had been working toward an impending application deadline for HUD tax credits, which would have constituted the Bohn Park project’s largest funding source (Bryen 2014c; Lyons Housing Collaborative 2015). However, the timing of the town’s increase in dedicated planning staff left only about two months to spare in finalizing the project proposal in time to meet this deadline. During that two months, staff had to contract with a developer,

\textsuperscript{45} Regulations required the homes to be lifted several inches or even several feet in order to secure permits for rebuilding.

\textsuperscript{46} Affordable housing is a notoriously difficult issue to tackle in many communities across the Front Range for similar reasons. For instance, interviewees in Boulder described vehement opposition to recommendations for elder-specific exceptions to home occupancy limits intended to better accommodate their fixed incomes due to concerns about growth and population density.
coordinate with advocates, and secure commitments from partner organizations. While planning efforts had been underway for months prior to this augmentation in staff capacity, what was seen as a last minute rush to complete the proposal legitimized opponents’ arguments that the town had not fully explored and vetted all of the options before settling on Bohn Park. Regardless of whether such claims were true, they held weight at a time in which administrative delays\textsuperscript{47} were increasing doubt in government leadership.

Finally, the involvement of the Boulder County Housing Authority (BCHA) in the project only added to these tensions. Many residents held strong anti-county sentiments due to long-standing power struggles with its various departments. For instance, three interviewees described vitriolic exchanges with county officials over the years because those officials had intimated that they should not have been allowed to build homes in the wildland-urban interface environments in which their properties were located. According to these participants, such comments were an indication of the county’s unwillingness to balance its ecological objectives with their needs as property owners. These adversarial relations became even more contentious after the floods.

As described in Chapter 5, conflicts over permits and permissions slowed many residents’ rebuilding activities and drove others to rebel against them entirely. Additionally, some felt that county representatives’ philosophical commitment to the preservation of open space and ecosystems had once again led them to dismiss their concerns and even jeopardize their property. Residents resented what they described as open space personnel’s callous

\textsuperscript{47} According to local officials, some delays were compounded by the stipulations that came with external funding. These reimbursement-based schemes effectively limited local governments to undertaking one project at a time because funds were not released until each had been completed and local jurisdictions could not afford to finance large projects independently.
disregard toward reasonable requests to mitigate issues on their land that threatened neighboring homeowners. Blanche, a 68-year old Lyons resident, described one such experience when flood debris on adjacent open space posed a flood risk to her home:

_The people who work for Open Space don't live in Lyons. So they keep giving you these stories like, "We don't want anything touched on open space." So right next door to us, we've got mountains of debris, like 20 to 30 feet high. "Oh no, we're not going to move that, because we want to leave that for nesting. That's normal habitat, it's normal for places to be flooded and we just want to leave it like that, because nature will take care of it." This stuff, in the spring when we have big run-off, this stuff is going to be going downstream. It's like, "Hi, [Colorado Department of Transportation], we have another problem with Open Space being totally uncooperative, and they don't care if their problems on their land since the flood are causing water in our crawlspace. They don't care. They're not going to do anything about it." CDOT's the practical people. We can't let these things happen, we can't let this kind of stuff affect people down the stream. But Open Space is—they're like the "bulgur, lala land people" [chuckles]. Well, if you talk to them about getting a new trail in there, they're all over that. “That's what we care about. But people, other property owners and how what we do affects them, forget it.”_

Dynamics such as these undergirded deeply-ingrained resentment of county government as a whole and fueled suspicions about the BCHA’s involvement with the Bohn Park plan. Some voters remained opposed to the idea of allowing the county to control land use within the town, regardless of the terms to which it had agreed.

 Returning to the “corrosive community” concept, residents’ increasingly combative relationships with government officials followed a pattern that scholars describe more broadly as reflections of feelings of recreancy, or a belief that institutional actors have failed to carry out their duties in a way that warrants societal trust (Freudenburg 1993). Scholars have argued that the sense of distrust that extends from these sentiments fosters stress, conflict, and trauma, further exacerbating community disruption in the post-disaster environment (Ritchie 2004; Ritchie and Gill 2007). In this case, ongoing political struggles with several county departments reduced residents’ willingness to cooperate with the BCHA. In addition to deepening these existing social “fault lines,” the floods triggered new ones (Gill 1994; Ritchie 2004). The town’s
limited capacity hindered its flexibility while creating a dependence on federal funding, which further eroded local autonomy in decision making. Town staff’s position as intermediaries between flood-affected residents and complex, slow-moving bureaucratic systems operated by the federal government further strained relations. These combined factors underscored perceptions of recreancy among many Lyons voters.

The issues discussed above, while not exhaustive by any means, touch upon some of the complex factors that influenced the outcome of Lyons’s proposed affordable housing plan. Despite advocates’ coordinated mobilization of a broad network of actors and access to resources, their efforts were no match for the underlying social dynamics that shaped voter behavior. Political forces, conflicting values, community history, and economic relations interacted in ways that undermined the process at multiple stages. Moreover, the forces working against the affordable housing plan ultimately rendered advocates’ “investments” a net loss by damaging community social capital more broadly. Again, these issues highlight the importance of scrutinizing the ways in which contextual factors facilitate or constrain the quality of outcomes extending from the deployment of social capital. Yet it is equally important to more closely examine why the “corrosive community” effect was so consequential for disaster recovery among the town’s displaced seniors. I analyze these issues using their narratives below.

Although a number of interviewees cited political power and social influence among wealthy opponents as another primary factor, the validity of such claims cannot be assessed with the existing data.
Informal Support, Economic Pressure, and the Loss of Belonging: Implications of Elders’ Displacement from Lyons

The seniors I interviewed who had lived in Lyons’s mobile home parks recalled their lives as having been stable and reasonably comfortable prior to the floods. Social networks that had solidified in the parks over the course of several decades created an amicable, tight-knit social fabric. Community life in Lyons took on a similar cast; for seniors, living in this small town for much of their lives had created a sense of belonging and shared connection. This “ecology of support,” along with low costs of living in the mobile home parks, helped elders manage a satisfactory quality of life that was manageable within their modest incomes (Klinenberg 2002; Kamo, Henderson, and Roberto. 2011). However, these conditions were disrupted when the floods tore through and shuttered both parks. The disaster was devastating for these communities, although residents with greater personal resources or access to support networks outside of the flooded area were better positioned to reassemble their lives. In the following sections I focus on the experiences of lower-income elders to illustrate how social connections, financial instability, and sense of belonging shaped their experience of displacement following the 2013 floods.

The loss of informal social connections was particularly challenging for elders who had previously relied on them to assist with routine needs. Lucille, a displaced mobile home occupant in her 80s, explained that being uprooted from Lyons had caused her life to unravel. She was the primary caregiver for her husband, Roger, who suffered from dementia and required light supervision. The couple had still enjoyed socializing with friends in town prior to the disaster, despite Roger’s cognitive challenges, because he had lived there for most of his life. As they could no longer drive, being able to walk short distances to socialize and engage in community
life was an important aspect of their physical environment. Nearby friends kept Roger company when needed, enabling Lucille to attend to tasks outside of the home, find respite from caregiving responsibilities, and obtain critical emotional support when frustrations arose.

Being flooded out of Lyons sent the couple into a tailspin of illness and loss. Limited transportation access made traveling to maintain existing friendships challenging as many of their friends in Lyons also did not drive. This distance effectively dissolved their informal support network, leaving only a few close connections who could visit on occasion. The couple experienced difficulty forging new friendships in an unfamiliar urban environment in which they found even the churches overwhelmingly large. Increasing mobility impairment left Roger unable to engage in many activities, which additionally hindered their ability to rebuild their social lives by forcing them to stay home much of the time. Further complicating matters, Lucille fell seriously ill in year following the floods. She blamed her illness on the combined effects of chronic stress and neglect of her own health as primary caregiver to her husband. Months after a stint in the hospital, she was still negotiating which medical needs she could forego to offset expenses. Although Lucille’s and Roger’s case is particularly fraught, it is exemplary of the kinds of challenges that can converge when disasters catapult elders into drastically unfamiliar environments. It also highlights how displacement can produce severe declines in access to informal support.

Consistent with prior studies, my data suggest that severing social ties is particularly traumatic for households with limited resources, as losing these connections can push a challenging-but-manageable situation toward the brink of calamity. (Ritchie 2004, 2012; Tobin-Gurley et al. 2010; Elliott and Sams-Abiodun 2010; Adeola and Picou 2014). On the other hand, this case also highlights the ways in which social capital can empower elders to cope with
adversity under the right conditions. In Lucille’s and Roger’s case, it is clear that living in physical proximity to close social connections was a key source of instrumental assistance, and Lucille reported performing supportive acts according to her abilities to assist others. However, her and other interviewees’ narratives regarding their pre-flood social lives also suggest that these connections met needs that were more expressive in nature. Research on older adults’ subjective assessments of wellbeing support this notion (Watanabe et al. 2004; Kamo et al. 2011). Scholars suggest that the perceptions of social support derived from social connections produce mental health benefits that extend beyond the instrumental support actually received (Cramm et al. 2012).

Lucille and Roger were not alone in their struggle to regain control over daily life in the aftermath of the floods. Many of the elders displaced from Lyons’s mobile home parks met increasing financial pressures upon relocating elsewhere. Those who could just make ends meet prior to the floods found themselves in even more precarious positions after losing living arrangements that had enabled them to minimize expenses. Rather than a few hundred dollars in lot rent for their mobile homes, some could only secure comparatively expensive apartments with high utility fees or resign themselves to waiting for organizations to locate accommodations they could manage financially (Bryen 2014d). Displaced residents also found that more driving was required to access work and other routine needs. Affordable housing options were limited due to flood damage in neighboring communities, and demand had increased with the regional diaspora flooding had triggered. Elders’ fixed incomes had not changed despite these new conditions.

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49 A lot rent is the monthly fee charged for keeping a unit in a mobile home park. Even among those who were able to secure replacement mobile homes, some found that lot rents were more expensive elsewhere by several hundreds of dollars.
Some seniors worked with case managers or SSO representatives to assist with basic needs and mental health support. These important social protections helped to reduce the severity of disaster impacts by connecting them with badly-needed resources. Consistent with the social vulnerability perspective, however, clients’ pre-existing social positions moderated the degree of stability such contacts could return to their lives. Safety net services were primarily oriented toward keeping the most vulnerable elders from slipping through the cracks entirely. Reaching a state of equilibrium that would enable genuine recovery was a far more complicated task. Interviewees’ state of recovery thus varied in terms of financial security, although all acknowledged that they had little or no cushion to manage future shocks. Yet these individuals also surmised that they had lost something that could never be replaced upon leaving Lyons. This was true even among those who had social connections elsewhere. Returning to my argument from the previous chapter, these comments indicated that formal assistance—while critically important for coping with disaster impacts—was incapable of replacing the informal support that many displaced seniors had lost.

Economic factors played a significant role in shaping the conditions of mobile home residents’ displacement and mediated their ability to respond to the challenges that emerged upon relocating. Indeed, interviewees recognized the economic roots of these challenges. However, the dissolution of their sense of social connectedness nonetheless had the most profound effect on this group’s subjective experiences. In discussing financial challenges, interviewees tended to emphasize that they had previously lived modestly and simply wanted to be able take care of basic needs. The primary frame through which these individuals discussed disaster impacts was in terms of relationships and community. A balanced ecosystem of support
had previously served as a buffer against the everyday pressures that bore down on them, and those supports no longer existed.

As noted above, seniors’ immediate support networks were emphasized in their narratives. Yet narratives also returned to descriptions of public life in Lyons. As a small town, Lyons had been a familiar stomping ground for decades. Elders’ identities were not narrowly partitioned around their neighborhood environments but situated in a broader social setting. Likewise, displaced residents’ expressive needs were not simply linked to their personal connections, but to a sense of belonging in their community. However, community attachment was also entangled to varying degrees with feelings of loss, grief, or anger due to the divisive nature of failed efforts to bring them home. Scholars have observed that that a sense of belonging to and interconnectedness with community is a critically important safety net in times of disaster (Campbell 2007; Li et al. 2011). My findings suggest that this remains the case over the longer term following such events, and that the loss of this sensibility can be a traumatic consequence of disaster-induced life transition.

Edelstein’s concepts of lifestyle and lifescape change help to shed light on displaced elders’ experiences. Lifestyle ([1988] 2004: 27) refers to “people’s way of living, including their pattern of activities and the relationships, places, and props needed to sustain these activities,” whereas lifescape refers to “both unique individual interpretive frameworks and shared social paradigms used for understanding the world.” While both lifestyle and lifescape can be altered significantly by a disaster, the latter constitutes a much more fundamental, consequential shift in that it changes not only the picture of everyday life but the underlying assumptions about the social world in which a person’s reality is grounded (Ritchie 2004). Both lifestyle and lifescape were transformed for many of Lyons’s displaced low-income seniors. Lifestyle change resulting
from forced relocation had interrupted the rhythms of daily life and severed their access to social
capital, as detailed above. These losses had been traumatic, but were the result of an “act of God”
that could not be controlled. However, the lifescape change triggered by soured relations with the
broader Lyons community imparted a sense abandonment, isolation, and loss of control, as I
discuss further below. Particularly in light of many seniors’ disenfranchisement in the Bohn Park
vote, the conflict over affordable housing magnified the sensation of having their community
wrested away from them.

The discourse about housing recovery in Lyons over time left many displaced mobile
home residents feeling discarded and even betrayed by their own town (Flemming 2014). The
rhetoric used by some who opposed the housing plan had ranged from dismissive to demeaning,
fueling suspicions that elite interests cared little for the elders’ return. For example, after an
opponent to the Bohn Park plan published an editorial in an area newspaper characterizing
discharged households’ relocation as a matter of preference, two displaced elders shot back the
following retort (Sharpe and Morse 2015):

Many of us were uprooted and forced to move because we no longer had a place to live, and
were told in no uncertain terms there would no longer be a place for mobile homes in Lyons. I
doubt most of us moved to Lyons in order to live in a mobile home, but rather we lived in mobile
homes in order to live in Lyons... We had no choice but "to begin new lives without waiting or
wanting to see if the town would provide housing," perhaps to the relief of some concerned about
property values. Most of us had to commit to other conditions we didn't want, based on our
financial means at a disastrous time. Now, many of us desiring to return simply can't, on our
own. We committed what finances we had left at the time to what we were able to find. We were
forced to move on. Most of us are still waiting for an opportunity to return... Those of us forced
to move perhaps revere the town of Lyons even more than those lucky enough to stay.

Interviewees echoed similar sentiments, explaining that flippant or classist comments made by
wealthy transplants to the community had left them feeling increasingly ostracized on the basis
of their economic circumstances. Concerns about gentrification and loss of culture were echoed
by other residents and stakeholders who remained in Lyons. However, this rhetoric took on even
greater meaning for displaced seniors from the mobile home parks. In light of their new outsider
status, the language some residents used in discussions about housing recovery was a signal that
many of those who represented “old Lyons” no longer had a place in the community.

As Lyons became increasingly unaffordable and the restoration of affordable housing
began to seem unlikely, interviewees’ hope of return also began to fade. Their narratives about
life prior to the floods emphasized a sense of belonging; yet discussions about the possibility of
return were more conflicted. The town’s propulsion toward gentrification led to concerns that
they no longer “fit” with the community’s changing identity. The class divisions underpinning
this change left some feeling that the town they had sought so desperately to rejoin was no longer
the one that would receive them if they did return. For example, Suzette, a 66-year-old displaced
resident, indicted elites for effectively whitewashing the community to which she once belonged
and redesigning it their own image:

After 35 years in this little, tiny community where everybody— I mean, if you fell down, you had
a dozen neighbors there to help you get back up. It’s not like that anymore, you can walk down
that street and nobody knows anybody… it’s not a town anymore, it’s not even a community, as
far as I’m concerned. They need to take the name Lyons away, and put another name on that
place, because Lyons does not exist…

I got real upset because there were a few things said with people that are up in Lyons right now.
They consider themselves the elite of the town, and I was called “trash” [at a meeting] because I
lived in a mobile home, and because I didn’t “want” to put the money out for a regular house.
[These] greedy people want to control Lyons instead of thinking about the people that are the
ones that created it and made it what it was. Like I said, I get real bitter.

The meaning that this lifescape change held for displaced elders’ outlook on recovery
was manifested in various ways. Importantly, it symbolized that their pre-flood lifestyle could
not be recreated. On the one hand, Lyons itself had begun to metamorphose, leaving them to
question what would be left for them if they could return. As an example, Suzette’s discussion of how the local culture had changed reflects the underlying concern that the things she cherished had been permanently altered. Even if she were to return to Lyons, she reasoned, the town she knew was now extinct. On the other hand, psychological distress caused by loss of support at both the individual and community levels was an ongoing hardship. Interviewees explained that they continued to grieve over being robbed of their sense of belonging and speculated that they would never fully recover from this loss.

Additionally, these sentiments regarding the “new” Lyons triggered a kind of cognitive dissonance in displaced elders’ thinking about the future over the long term. For example, comparing her former relationships in Lyons to those she had made in Longmont following the floods, one interviewee concluded: “I've made some friends, but it’s not like the 35 years that I spent with the friendships I had in Lyons. There’s a real big difference because I know I'll never have that kind of friendship again. It just won't exist.” Statements such as these were largely rational assessments of likely outcomes, given the situation. At this critical stage in their life course, starting over had forced elders to grapple with the ways in which everything to follow would be similarly transformed. Several interviewees stated that they had expected to live out their days in their chosen community. After their displacement, the backdrop against which they had envisioned their ultimate demise was distorted. A future in Lyons was unlikely, and their dramatic exit had landed them in communities to which they felt marginally connected at best. Each individual had either made peace or at least made the best of his or her situation; however, the experience of “statelessness” was a disturbing condition to envision into late life.
Summary

The challenges facing Lyons’s displaced low-income population highlight a number of important issues. Research examining the influence of social capital in community recovery often makes sweeping assumptions about how collective benefits accrue to individual households. Inability to derive such benefits is often attributed to a paucity of social capital. For example, Aldrich\(^50\) (2012:17) envisions “‘vulnerable’ populations not solely in terms of their age or income…but in terms of their lack of connections and embeddedness in social networks.” Additionally, studies focusing on community recovery have tended to prioritize bridging and linking ties due to the ways in which they facilitate access to resources outside of an actor’s immediate network. However, my research findings complicate such assumptions through two key lines of analysis.

First, this case study identifies cleavages between community and household recovery within a high-social capital environment. In doing so, this study builds on research examining the ways in which social capital is negotiated as a form of agency within a broader social structure. Previous research on the role of social capital in disaster recovery has demonstrated how socially embedded resources inform individual strategies, enhance collective action, and shape access to material resources (Nakagawa and Shaw 2004; Chamlee-Wright 2010; Elliott and Sans Abiodun 2010; Hawkins and Maurer 2010; Messias, Barrington, and Lacy 2012). It also points to the “Janus-faced” nature of social capital by showing how it can have negative effects. Social solidarity among some groups can result in the social exclusion of others. For example, Aldrich\(^50\) does acknowledge the possibility of negative externalities exchanged between high- and low-social capital communities and concede that not all groups benefit from these resources in the same way. However, there remains an underlying assumption that vulnerable groups within high-social capital communities, particularly those who themselves have access to social capital, will be able to harness this resource to overcome adverse conditions.

\(^{50}\) Aldrich does acknowledge the possibility of negative externalities exchanged between high- and low-social capital communities and concede that not all groups benefit from these resources in the same way. However, there remains an underlying assumption that vulnerable groups within high-social capital communities, particularly those who themselves have access to social capital, will be able to harness this resource to overcome adverse conditions.
(2012) demonstrates how high-social capital neighborhoods used their political weight to oppose temporary housing in New Orleans following Hurricane Katrina. The analysis presented above builds on this research by focusing in on the ways in which social capital deployed by mobilized actors interacts with social, political, and economic forces within the disaster setting—an interaction that can disadvantage some segments of a community. This supports researchers’ claims that understanding the mobilization of social capital in post-disaster settings requires a locally specific, contextualized approach (Moore et al. 2004; Chamlee-Wright and Storr 2011). It also showcases how rich qualitative assessments can identify complex issues that would not be readily apparent through the use of standardized quantitative measures.

Second, displaced seniors’ narratives reveal how disaster-induced disruption to bonding ties can lead to precipitous declines in social capital, particularly among lower income households. Broadening the discussion beyond instrumental resources, my data point to the subjective value that seniors assign to social relationships and social connectedness in the post-disaster environment. These findings link to aging research on social connectedness and subjective wellbeing as well as disaster literature that explores the mental health effects associated with the cognitive aspects of social capital. Studies in both lines of scholarship find that the experience of social support produces positive mental health benefits, regardless of how many resources interpersonal connections can provide (Cramm et al. 2012; Flores, Canero, and Bayer 2014; Wind and Komproe 2012; Matsuyama et al. 2016). The data presented above explore the negative outcomes implied in such research by revealing the consequences associated with the experience of disconnection and low levels of support (Cornwell and Wait 2009; Matsubayashi, Sawada, and Ueda 2013). As I have stated previously, this emphasis on the value of social relations does not discount the significance of material needs. However, it does raise the
profile of bonding social capital beyond its potential for delivering more “tangible” or easily measured resources. Finally, these insights build upon prior scholarship examining how disasters can deplete social capital in ways that do harm to individuals and communities (Erikson 1972; Edelstein [1988] 2004; Ritchie 2004, 2012; Ritchie and Gill 2007; Adeola and Picou 2012, 2014). In doing so, they help to broaden the “corrosive community” concept beyond the realm of technological disaster and to provide a more nuanced assessment of social capital.
CHAPTER VII
SENIORS’ CAPACITY FOR RESILIENCE

Introduction

The literature on disaster vulnerability among older adults has produced valuable insights about factors that increase risk and create disproportionately negative outcomes among these individuals. However, the “vulnerable population” label may have also discouraged scholarly attention to elders’ role as active participants in their own experiences. For example, Michael Greenberg’s (2014) book, Protecting Seniors Against Environmental Disasters: From Hazards and Vulnerability to Prevention and Resilience, contains eight chapters’ worth of discussion about older people’s vulnerability. In this volume, he discusses the work of Elaine Enarson (2012), who has consistently and vociferously warned against dismissing “vulnerable” groups as mere helpless victims. Yet summarizing her argument about conceptual blinders that lead to stereotyped assumptions, what Greenberg takes away from Enarson’s writings is the need to more fully appreciate the work that women (a group often assumed to be vulnerable) do as caregivers. Seemingly unable to make this conceptual leap to seniors, he dismisses the possibility that the older generation might be more adaptable to disaster as “just speculation” (Greenberg 2014: 119). While the omission of seniors’ capacity is particularly pronounced in this work due in part to its length and explicit focus on “prevention and resilience,” Greenberg is not alone. Even in studies that acknowledge age as a multifaceted concept, scholars still tend to focus only on the causes and consequences of the vulnerability of elders (Fernandez et al. 2002; Thomas and Soliman 2002; Pecovik and Gibson 2007; Gibson and Hayunga 2006; Cherniak 2008).

Studies that focus narrowly on older adults’ risk factors or best practices for entities charged with their protection are distressingly commonplace in the vulnerability literature. I
contend that such approaches hinder appreciation of the potential for seniors’ resilience. Tierney (2014: 189) notes that:

There is an automatic tendency to think of vulnerability and resilience as opposing concepts; those who are vulnerable are assumed to lack resilience, and in turn, deficits in resilience contribute to vulnerability. While these connections hold true for many vulnerable populations and groups…there are also many instances in which otherwise vulnerable groups are resilient in the face of disasters and other environmental stressors. Thus, although it is important to identify the factors that contribute toward vulnerability as a potential for loss, researchers must similarly avoid making totalizing assumptions about elders’ inability to respond to disaster impacts. Moreover, there is a striking need to better understand factors that contribute to older adults’ capacity for individual resilience and to support community resilience. This chapter aims to call attention to such factors.

In the first section below I begin with a short discussion of narrative analysis as a tool for understanding individual resilience. Next, I explore older adults’ accounts about agency and autonomy in the aftermath of the floods to explain how these beliefs shaped their recovery strategies and helped them cope with life disruptions. I follow these analyses by examining seniors’ accounts of recovery to once again shed light on the importance of biography and individual life histories for understanding individual resilience. In the second section, I expand my focus to situate seniors’ experiences within the broader community setting. I begin by examining volunteerism among interviewees and how these activities supported community recovery. I also briefly discuss the role of social capital in supporting volunteer activities. I conclude with a short case study of the Mountain Emergency Radio Network to highlight the role that elders can play in community resilience more broadly.
Narrative Analysis as a Lens into Resilience

Researchers from a range of disciplines and perspectives have used narrative methods as a means of exploring how people make sense of the world and bring order to their experiences (Murray 2000). Psychologists such as Michele Crossley (2000) have argued that people’s accounts of disruptive experiences such as serious illnesses are particularly useful for understanding how life is narratively constructed under more routine conditions. Such events, she argues, force them to reconfigure their narratives to restore a sense of order and return meaning to their lives. Sociologists have taken similar approaches to narrative analyses, with scholars such as Bury (1991) seeking to call attention to linkages between narratives of biographical disruption and the broader social structure in which meanings are assigned.

Scholars have also sought to expand beyond this narrow focus on biographies and disruptions to account for factors that shape individual experiences, such as stage in the life course and social norms and expectations (Williams 2000). For example, departing from the literature on this subject, Pound, Gompertz, and Ebrahim (1998) demonstrate that experiences that symbolize biographical disruption for some are viewed within a context of biographical continuity for others. In explaining why older residents in the East End of London who had experienced a stroke defined the event as “not that bad,” they argue for closer attention to both individuals’ lived experiences and the social environments in which they are embedded. Approaches such as these can help to explain the processes that enable psychological resilience while acknowledging the ways in which these behaviors are shaped by structural forces.

Shifting focus to back to the disaster setting, Michenbaum (1995:34) argues for applying a narrative constructivist psychological approach to accounts of disaster-related trauma because the ways in which “individuals and groups tell their ‘stories’ of stress and coping provides a
useful framework for understanding the different levels of adjustment.” Such analyses, he explains, can illuminate how people adjust psychologically to the impacts of disruption. Ritchie’s (2004) work builds on these perspectives. In analyzing Cordova, Alaska residents’ narrative constructions of issues surrounding the Exxon Valdez oil spill, she sheds light on the meanings assigned to events that unfolded in the aftermath of this disaster and links these responses to declines in social capital. In the following section I seek to contribute to this line of scholarship by exploring how the beliefs underlying seniors’ narratives enhanced their capacity for individual resilience. I begin by analyzing themes of independence, capacity, and agency in narratives about living arrangements in the post-flood environment. I then discuss interviewees’ reflections about their recovery trajectories to shed light on issues related to coping and psychological resilience.

**Narratives of Independence, Capacity and Agency in the Post-Disaster Environment**

People face a number of threats to their agentic position as they age, including issues that hinder their ability to live independent lives (Jolanki 2009). However, most people strive to retain control over their lives to the greatest extent possible as they age (Lloyd 1991). Scholars have identified the ability to remain living on their own in their community setting as a key concern among older disaster survivors (Huerta and Horton 1978; Tuohy and Stephens 2012). This concept also emerged as a prominent theme in Boulder County seniors’ narratives. Interviewees valued having control over their daily lives and being able to live in conditions that they had chosen. The 2013 floods posed several threats to seniors’ autonomy by disrupting these arrangements. Below I discuss seniors’ accounts of these challenges and how they responded to them in an effort to maintain their independence.
“There’s Nothing Like Your Own Place”: Regaining Independence in the Aftermath of Disaster

The destabilizing impacts of severe flood damage threatened many older residents’ ability to find housing. While most arranged to stay with friends for varying stretches of time during their displacement, barriers to resettlement pushed some toward living with family or in institutional settings over the longer term. For example, Mabel, an 86-year-old retiree in Longmont, was forced from her garden-level apartment a few months after the floods when an undetected mold issue caused a severe allergic reaction that required her to be hospitalized. Upon being released, she could not return to her former apartment, had difficulty finding affordable accommodations, and was forced to move in with her daughter. While Mabel had a good relationship with her daughter and was grateful for her assistance, she also felt smothered and longed for her personal space. Seeking out rent-controlled senior housing from the city enabled her to regain her independence. Reflecting on this experience, she stated:

_I don’t want to live with family. I want to be independent for as long as I can be independent. I don’t want government or anybody else to push me into a life that I’m not ready for. So I feel I will—well, I won’t say necessarily fight, but at least present my cause and try to get it settled somehow._

Mabel’s determination to maintain her autonomy was representative of most of the residents I interviewed. Being free to manage daily life on their own terms was important to them, and some went to great lengths to avoid being pushed into living arrangements that did not afford this freedom. Research findings indicate that they may have had good reason to be wary. Sanders et al. (2003) conclude that older adults’ forced relocation to inappropriate housing configurations after Hurricane Andrew obstructed them from completing routine activities of

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51 Consistent with studies on the networks to which older adults turn for assistance, interviewees generally described reliance on friend networks rather than on kin, especially children (Feld et al. 2006; Gray 2009).
daily living. This loss of independence caused emotional distress and ultimately threatened their physical health.

Some seniors’ efforts to assert their independence led to conflict with loved ones, as evidenced in an anecdote shared by Yvonne, a flood recovery worker in Longmont:

Some of the people, some of the elderly folks that had moved in with families, we’re seeing now they're wanting to move out. They want to be independent. We had a couple of people that went from a mobile home into one of the Longmont Housing Authority's senior apartments and hated it, just hated it, and were just miserable. So we ended up purchasing another mobile home for them because they didn’t use any of our funds. All they got was housing through the Longmont Housing Authority, and so they qualified through our program and we were able to help with them. Their family wanted them to stay in the assisted housing because it was better for [the clients], but [one client in particular] was miserable there. That was a tough one too because I was working with [the client] who wanted to move out, and then I had her kids who were trying to get her to stay and wanted me to tell her she didn't qualify. It was just a tough situation with her, but we were able to get her into her house.

Yvonne’s story calls attention to the ways in which conflicting objectives can drive family members to compartmentalize older adults’ needs and ignore their desires in a paternalistic effort to act in their best interests. While concerns about health and safety are often paramount to the intervening parties, this narrow focus can lead them to discount the importance of life satisfaction. This is not to diminish concerns about elders whose impairments render them unable to care for themselves. Rather, my aim here is to identify how the presumption of feebleness obscures attention to capacity and agency. In Yvonne’s case, the client needed additional assistance with some activities of daily living but did not pose a hazard to herself by living alone. Yet in the children’s push to minimize risk, they overlooked the opportunity to engage their mother in finding solutions that would safeguard her wellbeing while also ameliorating her emotional duress. In this situation the client fought back and asserted her right to access the formal assistance for which she had qualified. Being able to bypass the barriers to support imposed by her informal social ties was critical in this situation.
Studies suggest that older people are frequently compelled to respond to erroneous assumptions about their ineptitude. For example, Fiske et al. (2002) found that Americans tend to evaluate older people similarly to individuals with intellectual disabilities in levels of competence and “warmth,” or friendliness. Findings such as these suggest that, although well-intentioned, people tend to dismiss elders’ opinions due to affectionately held stereotypes of incompetence. Assumptions such as these obscure recognition of seniors’ actual capacities and threaten their sense of control in responding to a destabilizing event such as a disaster. As noted in the previous chapter, perceived loss of control contributes to the experiences of lifestyle and lifescape change and creates secondary stressors that compound those stemming directly from the disaster. Efforts to assert independence and regain control over daily life may serve as an important coping mechanism that enables seniors to regain a sense of security and normalcy.

“We’re Falling Down and Breaking Our Bones, but We’re Not Going Anywhere”: Negotiating Risk in Seniors’ Living Environments

Although prior research has identified community-dwelling older adults as an at-risk population, few scholars have directly engaged these individuals to understand how they think about preparedness for disasters and life disruptions (Ngo 2001; Tuohy et al. 2014). Yet there are important reasons to do so, as being able to anticipate and effectively respond to such shocks is important for their ability to maintain independence into late life. In one study that has examined these issues, Tuohy and colleagues (2015:627) concluded that preparedness was “a fundamental part of older adults’ everyday experience, and was consequently a practice which was actively used to address health and independence.” In speaking to elders they found that, because any number of significant life changes presented potential threats to independence, these individuals
tended to routinely assess, re-evaluate, and adapt to emergent challenges to preserve their way of life.

Similarly, many elders in the present study took pride in their ability to manage disruptions. For instance, on numerous occasions, interviewees rattled off lists of emergency supplies they had on hand as a means of demonstrating how preparedness was simply part of their everyday existence. This was particularly true of residents who lived in the mountains, as upheavals of nature were indeed a common occurrence in those settings. Most credited this deeply ingrained sense of self-efficacy with enabling them to take the 2013 disaster in stride.

Although several participants indicated that they had been forced to contemplate the dangers of the rugged mountain terrain following harrowing flood experiences, most had not seriously entertained the idea of relocating elsewhere. Others felt conflicted, but were reluctant to consider moving to the flatlands. These remote environments presented significant challenges for aging in place due to the scantiness of businesses and services, lack of public transportation options, and the physical demands involved with living in settings that were surrounded by wilderness. It is also worth noting that mountain communities such as Jamestown are far removed from hospitals, creating potentially life-threatening danger in the event of medical emergencies that cannot be adequately addressed by local fire departments.

Nevertheless, such surroundings were home for this group of interviewees, and being independent and self-reliant was central to their identity. Furthermore, the local housing market offered few relocation options that would enable them to maintain connections to their community. These considerations left many feeling determined to find ways to strike a balance between accommodating age-related needs and maintaining a lifestyle that was important to them. Ellena, a 75-year-old who lived outside of Lyons, described this approach to aging:
I have been really independent and lived kind of a rugged lifestyle for 43 years. I don't even have central heating. So I have a background of a can-do mentality. And I've been alone a lot, and I still have a can-do mentality. I think there’s a little chink in it. It's just hard to imagine being 95 and dealing with a disaster because I still feel like I can cope with things. Common sense is if I'm 95, it would be somewhat more difficult [laughter]. But I can't wrap my mind around it other than to try to get better connection with [my] neighborhood. I have my personal reasons for doing [this kind of networking to increase social ties among seniors]. One of them is that more people know me and I'm better connected. And I have more resources. I'm more motivated now to try to find ways to prepare for the unimaginable... As you know in Boulder County, if I sold my house, where would I go? It would be even more expensive to be closer to town. I'd have to go someplace altogether different. So I'm not really— it's foolish of me not to think of something else, but I can't think of what this something else is other than to go someplace totally different. So I just keep working on a support network and trying to be as just resilient and prepared as I can. And if the rock [above my home] falls down and kills me, then I don't have to worry about it [laughter].

Concerns such as these reposition this group’s emphasis on independence and self-reliance as a double-edged sword. While the ability to live independently in their community of choice was an essential element of life satisfaction, the decision to do so could also place elders in harm’s way in the event of a future emergency. The floods highlighted such issues, leading some to question how they could age well in communities with so few reliable services and so many risks. Yet the root of this second problem was also the clearest path toward an acceptable solution.

Between the fall of 2015 and spring of 2016, elders in Lyons, Jamestown, and other small mountain towns began strategizing to proactively address barriers to aging in place. Although the manner in which these activities unfolded varied across communities, the underlying goals were the same. Leaders spearheading these efforts communicated with service providers, assessed seniors’ needs locally, and reached out to see what other communities were doing in order to replicate or partner on projects. Elders held frank discussions in town meetings about challenges they had experienced or anticipated experiencing, and exchanged ideas about how to address them. In Jamestown, for instance, residents discussed using walkie-talkies as an emergency
communications backup, coordinating schedules to enable carpools through a nonprofit medical transportation service, and mobilizing local volunteers to assist with labor-intensive chores. Although some seniors remained skeptical about these initiatives, many were receptive and appreciated their orientation toward community-generated solutions.

These efforts are still ongoing and thus have not produced sufficient measurable outcomes for analysis at the time of this writing. They do, however, demonstrate the value of recognizing seniors’ agency in finding solutions to the challenges they face. Returning to Ellena’s quote above, many of Boulder County’s mountain-dwelling elders had a metaphorical rock sitting above their home. However, for myriad—and largely rational—reasons, they were unlikely to move to less risky environs. Failing to engage them as competent individuals acting in pursuit of their own interests could easily lead one to trivialize their concerns and chalk their behavior up to stereotyped notions of stubbornness or pride, as loved-ones, practitioners, and researchers alike are often inclined to do.

“As Long as I’m Alive and I’ve Got Two Little Legs, I’m Going to Keep Dancing”: Seniors’ Narratives of Resilience

Although the concept of resilience is notoriously cloudy and imprecise due to a multitude of definitions, scales, and subjects, in the context of disasters, it can be broadly defined as the ability of an entity to “bounce back” or reach a state of stability following disruption (Bonanno 2004; Norris et al. 2008; Cutter et al. 2008; Tierney 2014). The literature focusing on disaster resilience among older adults is overwhelmingly concerned with psychological and psychosocial outcomes. This research examines the extent to which age serves to protect against post-disaster life disruption. Scholars have identified a range of age-related mechanisms such as prior inoculating experiences, maturity, and coping skills that can reduce the negative psychological
impacts of disaster (Norris and Murrell 1988; Thompson, Norris, and Hanaceck 1993; Ngo 2001; Norris et al. 2002). However, other scholars caution that these protective effects may only manifest themselves among individuals with sufficient resources and social support to recover from their losses (Bolin and Klenow 1988; Takeda et al. 2003; Norris et al. 2002; Tracy and Galea 2006; Bonanno et al. 2010; Peek 2013).

Recent scholarship has cautioned for a need to move away from such myopic foci on individual explanatory factors if we are to truly explain why some older people are better equipped to rebound following disruptions. For instance, Cherry et al. (2015:440) conclude that “disaster outcomes depend critically on a combination of risk factors coupled with resilience characteristics.” This perspective argues that greater attention to elders’ individual life histories, circumstances, and accounts can help to better explain individual resilience (Tuohy and Stephens 2012; Cherry et al. 2015). My findings broadly support this position. Interviewees’ narratives reveal that, although social and financial resources played an important role in shaping external measures of recovery (e.g., financial stability, housing status, physical health), their subjective assessments of recovery could not be explained by these factors alone. Thus, in discussing resilience as a return to a state of equilibrium, these data highlight the importance of distinguishing between objective states of risk and recovery and psychological coping capacity.

Those who could afford to pay for unanticipated expenses and felt supported by their social networks were generally better equipped to free up mental and emotional resources to dedicate toward disaster recovery. For example, Helen, a 67-year-old Lyons retiree, explained that although she and her partner had experienced frustrations during their recovery process, support from the community, available time, and personal resources had enabled them to mitigate much of the stress that others faced:
If it had been something different where for instance our house had burned down, we're isolated from everybody else in that experience. But this was a community-wide experience where everybody was involved and affected in some way, some more seriously than others. But to have that sense of, we all went through this together and just that reliance on each other, and people being very eager to share what they had was just— our neighbors took us in and put us in their garage apartment. They knew we wanted to be close to our land and yet we couldn't be in here. So it just feels really good. It's not like we're on our own again. There's people who are thinking about what our situation is, and are interested in our input and our concerns and are responsive to those things. And it just feels so comforting. To have that kind of support. Other people's wheels are turning on our behalf. We're very lucky...

Reflecting on the role of personal financial resources, she added:

I think the point is that we were fortunate compared to some people who might not have had the means to do the things that we were being told we had to do. You've got to have your house assessed. You've got to have a surveyor come in and say where you are relative to the floodplain and the floodway. Things that, if we didn't have the money, flood insurance didn't cover it. And I don't know if we didn't have the money if there'd be somebody who would have been able to help us... but, and another aspect of being older is that we often commented on this, in the early stages of recovery, "Thank God, we're not working." We're retired. We thought, "God, how in the world do people do it?" People who have kids and/or jobs, how do they juggle all of these things that they have to accomplish in order to keep their house, get another house, transfer their kids in school, get the surveyor out to their place...? How in the world do they do that? And we had the benefit of all the time in the world. This was our priority at that point. So age was a great thing in that respect.

Despite the clear implications of social support and financial resources for seniors’ ability to reach an objective state of stability, psychological resilience was nonetheless embedded within the broader context of lived experience. Thus, even among seniors with the necessary resources, there was significant variation in subjective assessments of recovery. In fact, several interviewees who had experienced traumatic flood-related losses and ongoing barriers to economic stability demonstrated remarkable psychological resilience. For example, Suzette, a 66-year-old resident who had been displaced from her mobile home in Lyons, suffered tremendous losses after the floods:

[One week to the day after the floods] my husband passed away. Six months later, my mother passed away. And then I had several close aunts. Very close aunts and uncles. They all passed away within a six-month period from the time of the flood. It was like, "Oh, no. Here we go
again..." My father passed away in the home where my mother lived. My husband died in that home, and then my mother died. All three of them died in the same house, and I was there for all three of them. I had to watch all three of them die. My brothers and sisters weren't around. They were all living in different states, and just, like I said, just all the stuff of losing everything in Lyons, and then losing family, it was like, "What do I have left?" There is nothing here. Because, like I said, Lyons totally forgot me.

In the course of telling her story, Suzette explained that she had made peace with these experiences and was moving forward. Although things were still challenging on occasion, she explained, she had found strength to manage and progress. When I asked her about what had enabled her to keep this momentum, she replied:

I want to live, I want to— want to just prove to myself that even after being married for 35 years, and all of a sudden being thrust onto my own again, that I can still do it, that I don’t have to depend on anybody right now. Just for the simple fact that I’m not ready to die yet, so I’m not going to just sit back, and say, "I’m done and over with..." And it just— life is worth living, and you can’t just step back and say, "Okay, whatever." It’s just like grandmother used to say was, "Everything happens for a reason." I’m still trying to figure out what the reason is. Is there somebody out there that I can help? If there is, who is it, and how can I help them? And I keep looking at different ways to see what I can do or how I could help somebody. And that’s about it.

Despite having lost her closest loved ones, her community, and nearly her entire social support network in addition to having her mobile home destroyed from the floods, Suzette remained hopeful about the future. This not to say that she had fully recovered—far from it. She could barely make ends meet and had no financial cushion, leaving her state of stability tenuous at best. Further, she was matter-of-fact in her speculation that she would likely never regain the social life or companionship that she had lost. Yet in the absence of such comforts, she focused instead on doing small kindnesses for others and searching for a new purpose in life. While her circumstances did not afford optimism, shifting focus in this way enabled her to cope with losses and adapt to new conditions.

This perspective on life as an ongoing process of continuity in the face of disruption is an orienting framework that supports psychological resilience. Elders make sense of disaster
experiences in ways that vary according to their lifecourse narratives, once again highlighting the importance of personal history and individual circumstances in understanding psychological outcomes (Cherry et al. 2009). Narrative analyses such as these help to explain individual responses to disruption in the broader context of such conditions. For example, Pound et al. (1998) suggest that seniors whose lives are already characterized by hardship may minimize seemingly significant life disruptions because such events compound ongoing problems and pose few challenges to their explanatory systems or assumptions about the world.

Tuohy and Stephens (2012) suggest that older adults in possession of this adaptive capacity can make valuable contributions to their communities by helping to contextualize extreme events using frames of biographical continuity. Such narratives can serve as a tool for guiding others in managing life disruption. Although few studies have examined seniors’ role in supporting community resilience in any capacity, Tuohy and Stephens (2012) suggest that abstracting narrative approaches beyond individual sense making processes can help to do just that. Ritchie (2004) draws similar conclusions. She identifies linkages between narrative constructionism and the social constructionism perspective, arguing that “integrating these perspectives demonstrates how social reality is continually constructed and reconstructed by individuals and groups of individuals, including communities” (Ritchie 2004: 119-20). Similarly, I find that beliefs about independence, capacity, and agency undergirded seniors’ community participation in ways that supported broader goals of resilience. Shifting focus to this broader concept below, I first discuss interviewees’ volunteer activities in the aftermath of the floods. I then conclude with a brief case study of the Mountain Emergency Radio Network to show how seniors’ efforts to increase their sense of control over disaster information communication helped to augment mountain communities’ adaptive capacity.
Seniors’ Contributions to Community Resilience

Scholars have suggested that older people engage in volunteer service to stay active as workforce participation declines, and that this life course transition can contribute benefits that accrue to society (Choi 2003). For example, Liu and Besser (2003) suggest that rural communities can fill important service gaps by engaging this population through formal organizational ties. Yet they also caution that such activities may only be attractive in high social capital settings that foster a sense of investment and interconnectedness. Elders may be more receptive to such situations, as they tend to exhibit a high level of commitment to volunteerism when they do engage in such activities (Tang 2006). Further, older volunteers tend to derive a high degree of satisfaction from volunteerism because of the mutual benefits they see for themselves and others (Morrow-Howell, Hong, and Tang 2009).

Silva, Marks, and Cherry (2009) identify seniors as a largely “untapped resource” for post-disaster community support. Their assessment of local volunteer activity following Hurricanes Katrina and Rita indicates that although many older adults were too overwhelmed by disaster impacts to engage in formal volunteer roles, most saw significant value in such work. Those who were able to provide assistance to others did so in the form of activities that are often overlooked in formal counts of volunteer hours, such as feeding people or sorting clothes. My data support scholars’ arguments about the resources that seniors contribute in the post-disaster environment and further underscore the role of social capital in “opening the tap” to release these benefits.
Rates of volunteerism were relatively high among seniors in my sample, as nearly half (n=17) of the flood-affected residents and four older stakeholders from community organizations had been involved in some kind of post-disaster community support activity. These individuals volunteered in both formal and informal capacities in response to the disaster. Seniors’ contributions were an essential component of flood response and recovery efforts, yet typically involved the kinds of tasks that tend to go unrecognized or underappreciated in disaster settings. For example, these individuals cooked for first responders and volunteers, helped evacuees replace forgotten medications, and looked after children or pets. Although not “counted,” these tasks were no less important than more visible “muck and chuck” work in supporting flood response and enabled elders to assume an agentic position in broader community support efforts.

Many seniors became active in administrative and informal leadership roles following the floods. These individuals took on coordination-oriented tasks (e.g., staffing offices, organizing volunteers, etc.) that accommodated physical limitations while still enabling them to make a meaningful difference. Calvin, a Jamestown resident in his 70s, described how he supported community needs in the aftermath of the floods and reflected on the enjoyment that he had derived from helping others:

My back does not give me the privilege of shoveling the mud out of people's basements, I just can't do that. We have an agreement, I'm very careful about what I do and [my back] doesn't hurt me. It's worked out pretty well. But I was up there in town, trying to help with something almost every day. Mostly, I worked around the town hall. I worked on organizing donations, figuring out what we needed to ask for, categorizing things—so people could find what they needed—helping people find what they needed, taking orders and complaints from people... And I'd load up my pack with bottled water and donated sandwiches and take them around town to people who were working, and things like that...I got more friends than I've ever had in my life. That's the other important thing, it’s all the new friends, it’s all the people who are glad to see me, and it's the feeling I get in myself for helping people. They're two separate things. Because I
didn't do it to make friends, I did it because somebody had to do it and I wanted to help and I didn't have anything else to do. And I wasn't in trouble.

Calvin’s narrative reflects experiences shared by a number of other seniors who supported flood response efforts. While many had to negotiate physical limitations, they took an active role in supporting their communities by using skills that they had developed over the course of their lives. For example, retired editors supported grant writing; heavy equipment operators used their machinery to dig debris out of waterways; and those with social work training assisted with case management. Activities such as these helped to create the infrastructure needed to capitalize on physical volunteer labor or provide flood survivors with needed resources. Further, as Calvin suggests, this kind of work produced secondary benefits by helping seniors expand their own personal social networks in ways they had not anticipated.

“It's Our Town Too”: Civic Engagement in the Post-Disaster Setting

Interviewees who felt connected to their community were generally highly motivated to play a role in supporting flood recovery efforts. Several of my interviewees increased their civic engagement after the floods by volunteering on planning committees, serving as elected officials, or assisting with project implementation. These forms of civic engagement provided a mechanism through which seniors could have a hand in broader disaster recovery decision-making processes. For example, Kay, a Jamestown resident in her 60s, described her hope that the planning efforts in which she was engaged would contribute toward shaping the town’s future:

I really didn't start getting involved with recovery work in an administrative type way until September of 2014. And then that's when the town formed community planning groups, and so then, that's when I started getting really, heavily involved in that type of work. So through that kind of work, have met, within our group, where I'm involved in the [committee name redacted]. That has continued on, and certainly I've gotten close to people through that group that I didn't know before... and I really think everybody in the town is evolving. And what makes up a town
are the people. So, the hope is that, as we're all evolving and we bring this new outlook or these new things we've learned, and we bring it all together. That's what's going to make up our town. That's what I think we're in the process of doing now through committees that you're on, or whatever you get involved, or you know, you see— if you're evolving and you see somebody a week from now and you've evolved, well that's a whole different feeling [chuckles]. That is being transmitted to the person you're talking to. So my hope is that we're all evolving in a good positive way, and then we start putting all this together, and we become this great, wonderful town, in spite of the flood, as a result of the flood, maybe a better town because of the flood.

Consistent with Kay’s narrative, interviewees tended to describe such activities as empowering and observed that being involved in this capacity had led to personal growth. That is not to say that residents’ assessments of community planning committees were uniformly positive. Citing what they saw as overreach by local officials, several expressed frustrations that important decisions that affected their towns were being made without community involvement. However, nearly all found value in having a seat at the planning table. Interviewees’ generally positive assessments of the process reflect the greater sense of control obtained through this form of participation, despite these frustrations.

Unsurprisingly, this level of civic participation was most common in Jamestown and Lyons. These small town environments required a high degree of citizen involvement because budgets were limited and the needed positions simply could not be staffed otherwise. Yet the towns’ dependency on volunteer support also positioned seniors to make valuable contributions to community recovery efforts. Additionally, the small geographies and relatively robust social networks in these settings helped to offset problems of transportation access and communications, issues known to hinder elders’ civic engagement in larger communities (Hales 2012). A few interviewees in Boulder had participated in community feedback sessions, and I encountered older residents at public events who had served on committees. However, the scale of disaster recovery activities in the cities appeared to foster less active involvement from older
flood survivors, reflecting the need for different outreach strategies to engage elders in more urban environments.

**Disaster Resilience among Older Adults**

**“We’re Kinda Vulnerable, but Kinda Resilient”: Seniors’ Leadership in Community Resilience**

Older adults in Boulder County supported their communities through their participation in a range of emergency planning and preparedness activities. For instance, retirees contributed technical expertise to mitigation planning, organized community emergency preparedness trainings, and initiated projects to enhance local response capacity. The Mountain Emergency Radio Network (MERN) serves as a key example of the latter. Formed as a response to a wildfire that occurred in 2010, this group was critical in supporting the ability of mountain community residents to communicate with one another and with county government during the 2013 floods (ISET 2014).

The 2010 Fourmile Canyon fire wrought devastating damage across the Front Range, destroying 162 homes and burning 5,700 acres (Graham et al. 2012). Information dissemination had been a significant challenge for residents in responding to this disaster, as power outages disrupted communication networks. Following this event, mountain community leaders held a meeting to connect with one another and discuss lessons learned at the request of an official from Ward, an unincorporated mountain town. This led to the creation of a durable disaster preparedness network, the InterMountain Alliance (IMA), which some credited with having saved lives during the floods three years later. Liz, a member of the IMA, recalled how events unfolded after this initial contact:
The InterMountain Alliance, we had that one meeting, and as I'm sure you've heard me say before, we met for three hours. And then everybody was so excited about meeting one another, and had so much to talk about, that we just started meeting once a month. We've been meeting once a month for the last four years. And since then, each of the mountain communities have created their own community-based emergency-awareness plans. The Mountain Emergency Radio Network was born, which is a network of ham radio operators across the whole mountain region; understanding that when something happens, immediately our power goes out, and the phones go out, which leaves us pretty isolated… but the way it hooks in with seniors is that 90% of those ham radio operators are seniors.

As part of its mountain community capacity-building strategy, the IMA engaged the Boulder County Amateur Radio Services (BCARES), a county nonprofit organization of amateur (ham) radio enthusiasts that provides communications support in emergency response. Through a collaboration with BCARES, IMA members from several communities received training and access to radio equipment. Raising the question, as one MERN member recalled, “what good does it to for the ham operator to have information if no one else does?” their next step was to develop community-centered ham radio networks.

In the town of Allenspark, these efforts resulted in the creation of the Allenspark Neighbors Emergency Network (ANEN), which I discuss to showcase MERN’s contributions to mountain community resilience and response. The elders who founded ANEN incorporated emergency preparedness and social capital-building into its activities, reaching out to residents through existing social networks. During the 2013 floods, this network went into action, with households that still had power relaying information to neighbors who had lost it and communicating with outsiders on their behalf. The communications backup that ANEN provided

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52 The Allenspark Amateur Radio Network (AARN) is the specific ham operators’ subgroup of ANEN, which is a voluntary network formed to ensure that information gathered by ham operators would reach the broader community. MERN provided ANEN with “radio equipment, technical assistance, guidance on an organizational structure, and ‘moral support’” for the creation of AARN’s ham functions (ANEN n.d.).

53 Due to members’ informal relationships with local first responders and ties to BCARES, ANEN had pre-existing contacts at multiple levels of the formal emergency response infrastructure.
was critical as road access was disrupted and other communication methods failed. For instance, when the local fire chief’s radios stopped working during the emergency response period, ham operators stepped in to help, providing much-needed redundancy. One ANEN member recalled the experience as being “like the army accepting help from the boy scouts.”

In the most dramatic example of ANEN’s contributions, a group of seventh grade schoolchildren and chaperones on an outdoor education trip in Allenspark became stranded by washed out roads as the severe rain event transitioned into flooding. A senior ANEN operator who heard their discussion with the sheriff’s office relayed information about the group’s situation and sent another ham operator, also a senior, to assist them in relocating to a designated shelter. After bringing the group to a safe location, they continued to provide support by relaying information to the county Office of Emergency Management and assisting first responders in finding an alternate evacuation route. These activities laid the groundwork for what was ultimately a successful evacuation (Harem 2013; National Association for Amateur Radio 2013).

MERN members throughout Boulder County served as a critical link to emergency responders for isolated communities when the floods cut off access and wiped out other communications. Further, building on the momentum of this “trial by flood,” the seniors who had populated MERN began assisting residents in neighboring communities with setting up their own radio clubs, once again facilitated by connections made in the IMA. Activities such as these have helped to strengthen disaster preparedness and support community resilience across the IMA’s territory by encouraging emergency planning and training new ham operators, many of whom contributed additional skills and resources. Seniors, and retirees in particular, have taken the lead in these activities. Ham radio was particularly attractive to some elders because it
enabled them to master a new skill and have some control in a physically vulnerable environment. This was an empowering tool that produced benefits for the seniors themselves as well as their communities. Additionally, in creating a robust ham radio network through mutual collaboration, seniors had enhanced intra-community connections within the IMA and strengthened relationships could be called upon during future emergencies.

**Summary**

The ways in which older adults demonstrate agency and resilience in the disaster setting are manifold. Yet scholars have tended to overlook their capacity because of a narrow focus on factors that diminish it. While attention to disaster vulnerability among the aged is important and clearly warranted, it is imperative to consider how these individuals respond to disruption and why they do so in particular ways. In this chapter, I have raised concerns about how notions of vulnerability in practice can encourage unequal power dynamics between elders and other actors who levy influence over their decision-making power. Additionally, I find that exploring how seniors undertake adaptive strategies can inform approaches to both age-specific disaster preparedness and community approaches to recovery. My analyses of post-disaster volunteerism and ham radio operator activity challenge stereotypes of older adults as passive victims by discussing how their contributions help to fuel disaster response and recovery and ultimately contribute to community resilience. Yet they also emphasize the role that social context and social capital play in supporting or constraining seniors’ ability to participate in such activities.

In presenting seniors’ narratives, it is not my intention to divorce the discussion of beliefs about independence and self-reliance from more problematic discourses about aging. Scholars have levied insightful critiques of “successful aging” approaches that function to justify the
rollback of the welfare state by obscuring policies that pretend to empower elders while
snatching the supports from under them (Biggs 2001). For example, Portacolone (2011)
discusses ways in which policies and programs that emphasize independence as a moral
imperative result in systematic institutional failures to respond to the needs of disadvantaged
groups, and effectively blame the victims for their inability to manage independent lifestyles that
many are unable to achieve. Further, she points to ways in which internalized ideas about being
independent and living alone can pressure seniors to behave in ways that are detrimental to their
wellbeing. Similarly, Minichello, Brown, and Kendig (2000) point to ways in which older people
often fail to respond to ageist discrimination or avoid acknowledging legitimate age-related
needs for fear of embodying negative stereotypes. Issues such as these are, in fact, among many
underlying causes of social vulnerability, and I revisit them in the concluding chapter. However,
these issues must not diminish the imperative need to understand and acknowledge elders’ values
and beliefs. Furthermore, regardless of the roots of such concepts, engaging seniors as active
participants in their own experiences is a significant aspect of efforts to support their disaster
resilience.
CHAPTER VIII
CONCLUSION

Introduction

In the preceding chapters, I examined the experiences of older adults in Boulder County following the 2013 Colorado floods. This research sought to examine this population’s disaster-related experiences within their social context and explore the ways in which social capital influenced their recovery trajectories. In Chapter 4, I discussed the role of social capital among senior-serving organizations and how this resource can be deployed in support of older adults’ disaster-related needs. In Chapter 5, I analyzed seniors’ narratives, shedding light on factors that were important to their relationships as well as the ways in which they utilized social capital to respond to challenges that emerged during the recovery process. In Chapter 6, I provided a case study of the interplay between social capital and the broader social context in which social resources are embedded. Then, in Chapter 7 I turned again to seniors’ narratives of recovery and discussed older adults’ capacity for resilience, illuminating the active role that these individuals play in their own experiences and in supporting their communities during and after disaster. In this final chapter, I discuss the key insights derived from the study, explain the practical implications of my research findings, and address broader implications for theory. I conclude by identifying directions for future research.

Empirical Contributions

Role of Senior-Serving Organizations

Scholars have emphasized the importance of involving aging services experts and service providers in disaster planning and emergency management (Fernandez et al. 2002; Elmore and
Brown 2007; Aldrich and Benson 2008). However, to my knowledge, this is the first study to examine organizational social capital among community senior-serving organizations in the context of disaster. This line of inquiry helps to broaden our understanding of key sources of support for older adults in responding to and recovering from such events. My findings suggest that these organizations are uniquely positioned to assist seniors due to the particularized trust they engender, the relationships they are able to develop with clients, and the population-specific expertise they can contribute to disaster planning and response. Further, I demonstrate how the institutions that develop around aging services can generate and deploy social capital to more effectively offset stressors their clients experience and also enhance organizations’ effectiveness in serving clients. These collaborations can create better outcomes among community-dwelling older adults affected by disaster.

However, these conditions are contingent upon the social setting and thus cannot be expected to occur organically across all social settings. Prior research has found that disadvantaged communities generally host a smaller number of service provider organizations compared to more affluent ones. Organizations that do serve these poorer areas tend to have less robust networks among them and fewer linkages to disaster planning processes (Zarkour and Harrell 2003). Access to resources, therefore, also plays a role in shaping local institutions and the kinds of normative structures that can develop within them (Lin 2001). Such barriers must be addressed if strong, collaborative network structures are to be developed. Finally, my research on SSOs demonstrates that the extent to which these organizations can return stability to seniors’ lives in the wake of a disaster is also largely contingent upon the client’s social environment and access to resources. Thus, although these entities can be critical sources of support, they are not a blanket cure for seniors’ vulnerability.
Psychosocial Impacts of Bureaucratic Uncertainty

The concept of uncertainty in the aftermath of disaster has primarily been discussed in relation to persistent environmental contamination, protracted litigation and unforeseeable health consequences resulting from technological disaster (Gill and Picou 1998; Baum et al. 1992; Kroll-Smith and Couch 1990, 1993; Edelstein [1988] 2004; Picou et al. 2004; Gill et al. 2014). Researchers have also argued that the stress resulting from these uncertainties disrupts the social structure and creates conflict, further amplifying stress and triggering declines in social capital at the individual and community levels (Ritchie 2004, 2012.; Ritchie and Gill 2007). Uncertainty in the aftermath of natural disasters can also be a significant source of stress (Adams et al. 2009). For example, New Orleanians who attempted to utilize the Road Home program for assistance with rebuilding devastated homes following Hurricane Katrina found themselves in a years-long battle in which nearly half received no help at all, while the amount that most others received was entirely insufficient (Adams 2012). Vincanne Adams (2013) demonstrates how this seemingly perpetual state of being “in recovery” normalized residents’ chronic trauma, triggered stress-related illnesses, and slowly eroded the coping capacity and physical resources that the hurricane had spared. Scholars have argued that the delays and ambiguities extending from poorly designed government disaster policy can impede individual and community recovery (Chamlee-Wright and Rothschild 2007). My research supports these conclusions and suggests the need for better solutions to distribution of financial assistance.

Among seniors in my study who could not afford to bypass or disengage from the federal disaster assistance system, prolonged uncertainty was a substantial source of stress and a hindrance to recovery. For example, although the timelines for federal buyout decisions extended over the course of years rather than decades (as is often the case with litigation resulting from
technological disaster), seniors’ lives nonetheless remained disrupted during this time in ways that threatened long term consequences. For instance, bureaucratic delays depleted seniors’ financial reserves and left them more vulnerable to future disruption. Ill health, bereavement, and financial instability also threatened to derail recovery for some elders. The confluence of such issues was particularly pernicious and led some to speculate that they were perhaps mutually reinforcing, as health problems and mortality appeared to follow severe life disruption.

**Informal Support**

Social support obtained through intimate kin and friend connections played an important role in seniors’ narratives about responding to and recovering from the floods. Instrumental support obtained through these channels was critical in helping many elders manage financial challenges and rebuild their lives following disruption. Interviewees activated their networks to access labor, lodging, financial support, and other material resources. However, the data also suggest that expressive support remained uniquely valuable. Seniors emphasized social interaction and feelings of connectedness as important elements of life satisfaction.

These findings are consistent with prior studies, which suggest that the perception of social support is beneficial for mental health among older adults in the aftermath of disaster (Wantanabe et al. 2004; Li at al. 2011; Matsuyama et al. 2016). Moreover, as some scholars have suggested, my data indicate that *feelings* of support and connectedness are important independent of support actually received (Norris and Kaniasty 1996; Wind and Komproe 2012; Flores et al. 2014). Conversely, narratives of displaced elders following the 2013 floods echo findings of research suggesting that the experience of disconnection and diminished support can be harmful to seniors’ mental health and wellbeing (Cornwell and Wait 2009; Matsubayashi et al. 2013).
**Community Context**

Seniors’ accounts of community life illustrated the importance of “ecologies of support” in managing everyday challenges (Klinenberg 2002). These environments provided access to social capital and conferred a sense of belonging that supported life satisfaction even in the absence of material comforts. Yet interviewees’ experiences also underscored ways in which such ecologies were vulnerable to disaster-induced disruption. These effects were particularly traumatic among disadvantaged individuals whose social networks were characterized by a high degree of homophily, as households with similar resource profiles were devastated by impacts of similar intensity and, thus, were unable to support one another (McPherson, Smith-Lovin, and Cook 2001; Hawkins and Maurer 2010; Tobin-Gurley et al. 2010; Pardee 2012). These findings once again point to the importance of institutional support and highlight a need to target seniors in communities in which disasters cause widespread damage and disruption.

Additionally, my data point to the potential for processes aimed at ameliorating disaster impacts to trigger new threats to social cohesion, as I illustrate in my discussion of the affordable housing conflict in Lyons. In this case, conflicts related to the siting of proposed affordable housing on the town’s parkland led to further declines in social capital at both the individual and community levels. My discussion of collective narratives in Jamestown similarly reflects how processes that can unify, foster social cohesion, and support the development of social capital for some community members may also alienate others.

**Seniors’ Capacity for Resilience**

As noted in previous chapters, scholars have paid insufficient attention to seniors’ capacity for resilience, instead tending to portray them as passive victims in need of others to
speak and act on their behalf (Tuohy and Stephens 2011, 2012; Tuohy et al. 2014; Miller and Brockie 2015). This dissertation situates social capital theory within the vulnerability perspective as a means of exploring the myriad ways in which members of this potentially vulnerable population respond to disaster losses and how their actions are shaped by the social environment. Although I utilize social vulnerability theory as a guiding framework, I have sought throughout to recognize seniors’ agency.

In analyzing seniors’ narratives, I identified maintenance of independence and expression of agency as two values that guided recovery strategies and decisions in ways that enabled them to regain stability following disaster-induced disruption. These findings raised concerns about the need for greater recognition and acknowledgement of seniors’ agency in decision making about their lives. In identifying cleavages between psychological resilience and external measures of life stability, my research reveals a need for closer attention to individual-level measures of resilience as a concept and more careful consideration of what it means for a person to be resilient. Finally, I identified interviewees’ contributions to community resilience, an area of research that has received little scholarly attention, and found that tapping into and fostering seniors’ capacity to for resilience may also serve as an investment in community capacity.

Theoretical Implications

Neoliberalization of Recovery and Resilience

The findings presented in this dissertation highlight several theoretical issues regarding disaster recovery and disaster resilience efforts. First is the way in which neoliberalism frames individuals as entrepreneurs who are responsible for their own fates. In her analysis of bureaucratic failures in the aftermath of Hurricane Katrina, Adams (2012) finds a particularly
concerning trend in the neoliberalization of disaster assistance, in which disaster survivors are increasingly expected to behave as “empowered consumers” of public resources rather than people in dire straits who need assistance. She argues that these arrangements “create a type of ongoing state of disaster for the poor,” who become mired in endless battles against systems that essentially punish them for not having enough resources to access more resources (Adams 2012: 195). While the challenges uncovered in my research were not exact replications of the issues that plagued the Hurricane Katrina response and recovery in terms of rampant privatization and outsourcing of government programs, the underlying expectation of disaster survivors as “empowered consumers” rang true.

These analyses point to a second concern, the fact that neoliberalism rolls back government protections. Returning to my discussion of disaster assistance from Chapter 5, Seniors who could qualify financially were granted the “privilege” of taking on debt that would linger for decades to finance their recovery. Others were not eligible for even this form support and were thus left to cobble together whatever resources they could from nonprofit agencies and charities that had assumed responsibility for maintaining the social safety net in the absence of government aid. The expectation that such organizations will fill in resource gaps is used to justify the abandonment of seniors and others by the institutions responsible for supporting them.

Third, due to their emphasis on the need for flexibility and adaptability, resilience narratives mirror neoliberal ones by routinizing the anticipation of institutional failures such as those listed above. This trend renders particularly problematic efforts to enhance resilience through greater civic participation as is advocated, for example, through FEMA’s “whole community” approach to disaster risk reduction. By emphasizing the role of the “whole community,” official policy de-emphasizes the importance of government’s involvement in
reducing disaster risks and fostering response and recovery efforts. While I do not question the value of bringing civil society and private sector stakeholders to the table and empowering communities in responding to disaster, it is apparent that such efforts also serve to justify the state’s increasing reliance on non-governmental entities to assume responsibility for meeting the needs of disaster-affected communities.

Underlying the abovementioned issues are the ways in which resilience and neoliberal narratives “naturalize” the social forces that can create vulnerability. Rather than seeking to ameliorate the root causes of problems such as climate change and rapid urbanization, these discourses direct people to adapt and be resilient against their negative consequences (Tierney 2015). In discussing disaster preparedness and resilience, then, it is worth considering how well-intentioned programs aimed at addressing shortcomings of the state may also serve to both legitimize and divert attention away from them. For example, efforts to build social capital through networking activities such as the development of Voluntary Organizations Active in Disaster (VOAD) groups are critical for enhancing local capacity for a coordinated emergency response. However, rather than being promoted as opportunities to collectively mobilize against the production of risk, they help to both obfuscate and legitimize the state’s retreat from involvement in disaster management.

**Independence and Self-Reliance**

Concepts of independence, self-reliance, and autonomy were consistent themes in Boulder County seniors’ narratives. To some extent, this reflects the cultural milieus in which many interviewees were embedded, where such characteristics were highly valued and in some ways required for everyday life. Interviewees indicated that feeling independent and capable helped them cope with adversity and ultimately translated into enhanced disaster resilience.
However, that is not to say that these beliefs were uniformly beneficial or that they were limited to seniors living in remote environments. In the context of broader discourses about what it means to age well, research suggests such principles can also be deeply problematic.

Huerta and Horton (1978) argued that elders who were affected by flooding caused by the 1976 Teton Dam collapse were reluctant to engage social work programs or pursue financial assistance because these services were stigmatized as “welfare” and thus conflicted with values of independence and personal integrity. More contemporary research demonstrates that this pattern is not a relic of a bygone era. Langer (2004) suggests that acknowledging the often overwhelming nature of disaster impacts and requesting assistance in responding to them can be difficult for many seniors. She attributes these challenges to feelings of shame about declining capacity and fear that outside intervention will trigger further declines in autonomy. These reactions are not limited to the post-disaster setting. Even under routine conditions, the compulsion to “go it alone” leads many seniors to compromise their wellbeing for fear of being a burden or losing control over their lives (Portacolone 2011, 2013). Thus, discussions about the downsides of seniors’ beliefs about independence and self-reliance in the context of disaster can benefit from examining their origins.

Critiques of the “successful aging” movement, which promotes aging as an individualized and controllable process, help to shed light on these issues. This scholarship points out that rhetoric emphasizing individual responsibility, proactive planning, and perennial youthfulness largely traces back to neoliberal ideology and has been deployed as a means of limiting the role of the state (Rudman 2006). For example, Dillaway and Byrnes (2009) trace the historical roots of successful aging paradigms by drawing connections to the conservative political movements of the 1980s, which aimed to repeal Medicare and Social Security.
Capitalizing on fiscal crises to implicate social welfare programs as burdens to society, politicians found that arguments aimed at “empowering” elders provided a convenient vehicle for policies that blamed poverty and ill health in old age on laziness and irresponsibility (Martinson and Berridge 2015). Over the past several decades, images of “successfully aging” seniors have fostered the marginalization of those who experience age-related decline, framing them as simply “not well preserved” (Holstein and Minkler 2003: 793). When internalized, such beliefs can manifest themselves as an aversion toward seeking or receiving assistance as people age, despite the fact that interdependency characterizes most people’s existence at every stage of the life course (Rudman 2006).

In examining seniors’ beliefs about independence and self-reliance, scholars must be critical of these broader discourses and the ways in which they legitimize institutional failures to support elders and others in need of assistance. Yet it is also important not to dismiss seniors’ values as mere vestiges of neoliberalization. There are important reasons to take seriously older people’s desire to be treated as autonomous persons—particularly after a destabilizing event such as a disaster. In fact, such events may serve as critical opportunities to disrupt discourses about self-reliance precisely because disasters can be so overwhelming. Instead, scholars should seek to identify pathways though which seniors may resist negative stereotypes and advocate for assistance from the state as a right.

Expanding the “Corrosive Community” Concept

My case study of the affordable housing conflict in Lyons called attention to the potential for issues that emerge during the recovery process following a natural disaster to produce “corrosive community” dynamics. Although this concept is most frequently used in the context of technological disasters, my data suggest that similar patterns emerged as a result of the 2013
floods. These findings illustrate the socially constituted dimensions of disaster, as such dynamics are not contingent upon the hazard agent. They also call attention to the need for better understanding community conditions and social processes that foster beliefs about recreancy, disrupt the social structure, and ultimately erode social capital.

Prior research on corrosive community dynamics helps to explain how organizational responses intended to address the consequences of disasters can instead produce additional problems and further prolong community disruption (Erikson 1976; Freudenburg 1993; Picou et al. 2004, 2009; Ritchie 2004, 2012; Ritchie and Gill 2007). Yet it also emphasizes that these outcomes are not inevitable. Scholars maintain that, given the social roots of such problems, systems can be put in place to avoid secondary harms (Marshall et al. 2004). For instance, Ritchie and colleagues (2013) argue in favor of policies and programs aimed at preventing recreant behavior and addressing the consequences of public perceptions of recreancy as a more effective approach to long-term recovery. In discussing the poorly designed disaster recovery programs implemented after Hurricane Katrina, Gill (2007) explains how governmental responses to disaster can produce secondary trauma. Research presented by Adams (2012, 2013) echoes these findings, further articulating ways in which recreant behavior prolonged the recovery process and eroded residents’ wellbeing. The social impacts of these institutional failures in many ways mirror the disruption described in research on technological disasters. Comparing how perceptions of recreancy develop in the wake of both natural and technological disasters may help to illuminate pathways toward reducing post-disaster community disruption.
Practical Implications

Accessibility of Disaster Assistance

Among the most striking and problematic findings from this research is the overwhelming difficulty that seniors experienced with accessing disaster assistance. As noted in previous sections, the prohibitive complexity of bureaucratic systems has been a known issue for decades; yet these problems continue to plague seniors and others in the post-disaster environment (Jenkins et al. 2007; Adams 2011; Wang and Yarnal 2012; Onstad et al. 2012; Caruso and Kunzelman 2014; Greenberg 2014). In addition to being overwhelmingly complex, these systems are set up such that, the assistance of service providers notwithstanding, only the most entrepreneurial elders are likely to obtain the assistance needed to support their recovery. Specifically, access is limited to seniors who seek out assistance from a “marketplace” of assistance services, know or learn how to “work the system,” and recruit volunteers and advocates to assist with their needs. Beyond the deeply troubling questions of equity it raises, the current system of disaster aid provision creates several practical concerns that hinder elders from receiving disaster assistance.

First, the stressors associated with obtaining financial assistance compound existing stress resulting from the disaster itself. The added burdens on time and energy required of disaster assistance applicants can itself serve as a secondary form of trauma (Gill 2007). Additionally, several of my interviewees recalled being forced to repeatedly revisit traumatic experiences. Poor record keeping within bureaucratic systems and a constantly changing “cast of characters” handling their paperwork required them to explain what had happened to them each time they attempted to complete their applications. These requirements effectively re-
traumatized applicants or drove them to abandon their applications altogether, thereby leaving them in a position of heightened vulnerability. Compounding these burdens, federal organizations’ increasing reliance on the conveniences of technology threatened the ability of many older adults to even access assistance. Although many of the interviewees in my study were computer literate and could afford such technology, this was not the case across the board. While being able to research and submit disaster assistance applications online was a convenient option for some, others struggled to figure out how to go about doing so. As I discussed in Chapter 4, flood-affected residents were directed to visit their Disaster Assistance Center, and no phone numbers were listed due to the temporary nature of those facilities. For elders whose access to transportation was limited, in-person visits to DACs presented a significant challenge that for many could not be circumvented by simply applying online. Such challenges should be anticipated and addressed in future disaster relief planning.

**Meaningful Engagement in Emergency Planning and Resilience Initiatives**

Due to the concept’s popularity as a “scientific and policy fad,” resilience initiatives abound (Tierney 2015: 1329). Many such activities focus on goals of community engagement. For example, the prominent Rockefeller Foundation’s 100 Resilient Cities program advocates for the inclusion of an array of local stakeholders in building community capacity, as does the National Academy of Sciences Resilient America Roundtable. However, as with other resilience initiatives around the country, the question of who represents seniors’ interests in such efforts remains problematic. While it is often assumed that service provider or advocacy organizations will speak on behalf of the aged, there are few examples of efforts to bring older individuals to the table, let alone to create pathways for them to have influence over decision-making. As resilience initiatives roll onward, there remains a need to systematically ensure that members of
“vulnerable” populations are not lumped together and problematized, but are, rather, genuinely included in the process and that they are involved in meaningful ways.

The need for such inclusion is increasingly important. Returning to the trends in aging discussed in Chapter 1, the population of older persons is projected to rise rapidly in the coming decades. There is thus a growing need to better understand and support their capacity for resilience. In light of previous discussions about the valuable skills that these individuals can contribute, this trend also presents a significant opportunity. For example, my case study of the Mountain Emergency Radio Network demonstrates that engaging and empowering seniors may also serve as valuable investments in community resilience more broadly.

**Older Adults as an Untapped Resource**

Scholars have discussed volunteerism and other forms of social participation among older adults as activities that can help to stave off illness, disability, and cognitive decline (Morrow-Howell 2010). The capacity of older generations to support their communities through volunteering is widely discussed as a mutually beneficial activity (Liu and Besser 2003; Morrow-Howell et al. 2009; Piercy, Cheek, and Teemant 2011). Applying these patterns to the disaster setting, Allen and Nelson (2009) suggest that involvement in disaster recovery among seniors can help them cope with disaster impacts and feel more empowered.

However, in the process of “opening the tap” to the hidden resource of elders able and willing to donate their time, it is essential to acknowledge that such opportunities for social engagement and volunteerism are not equal across groups. For example, Rozanova, Keating, and Eales (2012) caution that assumptions about seniors’ availability for volunteerism are often based on conceptions of middle class retirement wherein these individuals have leisure time to
dedicate toward such pursuits. They find that low income, minority, and female elders are often less able to participate in such activities because they are more likely to be working, caring for other family members, or they may experience discrimination that hinders participation. Further, such issues may be exacerbated in the aftermath of disaster, as members of low income and minority groups are more likely to suffer disproportionate impacts that further hinder participation (Silva et al. 2009; Hales 2012). Thus, efforts to foster social participation among seniors in ways that recognizes the heterogeneity that exists within this population should take into consideration potential barriers to inclusivity. For example, Rozanova et al. (2012: 34) observe that the “expectation that older adults should volunteer and work for free only because they are old whereas younger people would be paid for similar work is one manifestation of ageism and discrimination.” Instead, they argue, efforts to include those who have been marginalized can avoid reinforcing existing inequalities by providing alternative mechanisms such as pay or caregiver support to enable engagement.

**Recommendations for Future Research**

*Seniors’ Volunteerism in Disaster Planning and Response*

There is little published research on older adults’ participation in disaster response and recovery work. Yet my findings suggest that there are important reasons to examine these activities. A recent unpublished evaluation conducted by the evaluation firm Community Science in collaboration with the University of Colorado Natural Hazards Center suggests that programs such as the national Retired Senior Volunteer Program may provide valuable support to communities in the aftermath of disaster. Yet this project collected few perspectives from older service beneficiaries and yielded little feedback from retired volunteers. Thus, future research
should more systematically examine volunteer deployments involving older adults in the post-disaster environment. Such projects would facilitate an understanding of how to engage seniors and best utilize their skills and expertise in a manner that they will find meaningful and enjoyable. Additionally, research funders should require that projects of this nature utilize findings to inform the development of disaster preparedness and education materials or programs that target seniors.

**Community Settings**

Many of the social dynamics described in this research were made possible due to the small populations and unique geographies of the towns of Jamestown and Lyons. As mentioned in previous chapters, seniors in Boulder and Longmont were far less connected with their broader community contexts. Future studies should pay more attention to community size, geography, and demographic profiles to gain additional insights about potential differences among urban, rural, and suburban environments of varying sizes. Comparisons of this nature may yield insights about a variety of factors that can shape seniors’ disaster outcomes.

Level of affluence is a related dimension that would benefit from a broader comparison. For example, the affluence of Boulder County presents a number of questions about how a similar event would play out in similarly sized communities that are not so wealthy. Although the municipalities represented in my sample operated on budgets of varying sizes and capacities, Boulder County offers an array of amenities and resources. Additionally, many of the seniors in my study were educated, had resources, or were able—to varying degrees—to connect with service providers who had the flexibility to reorient their work in support of the county-wide flood response and recovery effort. While some interviewees did report devastating life disruption as a result of the floods, the broader county setting begs the question of how
organizational dynamics, community participation, and other responses might look in other communities.

Yet it must be noted that “institutional density,” or the number of organizations able to respond to human services and other needs in the aftermath of disaster, is not reducible to affluence, although the two are in many ways related. The geographies of Jamestown and other mountain communities help to illustrate this point. Seniors in these environments were resourceful and resilient in part because this was a necessity of the harsh environments in which they lived. Not having a reliable infrastructure for most needs prior to the 2013 floods in many ways fostered these characteristics. Future research should examine how to encourage and develop similar adaptive capacity in communities in which people are more dependent upon institutions such as healthcare, first responder protection, and retail stores (e.g., more urban settings).

Expanding to Diverse Populations

In the present study I was hindered in my attempts to reach out to Latino elders, and thus their voices are not strongly represented in my analyses. However, in engaging service providers about their experiences working with these populations, it became clear that many of these individuals faced challenges that were qualitatively different from other ethnic groups. For example, service providers suggested that Latino seniors tended to have more reliable access to close bonding ties, but faced unique challenges with accessing financial assistance. Some faced language barriers that hindered the submission of paperwork, while others were unable to use certain federal programs due to their citizenship status. Still others were reluctant to seek any assistance due to fears about deportation, leaving them vulnerable to exploitation by unscrupulous lenders. Future research should focus more attention on racially and ethnically
diverse populations of seniors to better understand the differences and similarities in disaster preparedness, recovery, and resilience needs.

Concluding Remarks

The issues I have described above indicate a need for greater attention to older adults’ voices and experiences both within and beyond the disaster setting. Too often the aging process is problematized because of the challenges that can manifest themselves at later stages of the life course. However, my findings demonstrate that in many ways such challenges extend from a tendency to ignore seniors’ capacities, discount their perspectives, and treat the potential for vulnerability as a condition intrinsic to old age rather than a position rooted in social processes. It is critical for us to critically examine our assumptions about older people and the process of aging. In doing so, we must consciously seek to acknowledge difficulties while also recognizing opportunities.
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APPENDIX A
STAKEHOLDER INTERVIEW GUIDE

Senior Serving Organization and Key Stakeholder
Interview Guide

This interview is designed to obtain information about your organization, its experiences during and immediately after the September 2013 Colorado Floods, and its efforts to prepare for future disasters. The questions I will be asking will cover four major topics: your organization’s activities and services, your organization’s experiences during and after the floods, the disaster planning activities in which your organization has been involved, and, finally, the constituents/constituents that you serve and their experiences during and after the flood.

The first set of questions concerns your organization.

1. First, please tell me about your role in the organization. What are your duties and how long have you been involved at ____________?

2. a. What are the most important services your organization provides?
   b. For each service, how many constituents/constituents does the organization serve, on average, each year?

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3. How would you describe the clientele you serve in terms of demographic information—for example, with regard to race/ethnicity, gender, social class, or sexual orientation? What are the kinds of problems most frequently seen—i.e., with regard to disability, health conditions, or cognitive functioning?
4. How would you describe your relationships with other organizations that serve older adults and/or people with disabilities? Is there a degree of collaboration, or do you function more or less independently?

5. Who are your major financial contributors? Where do your funds come from? Are there reports that are accessible on your organizational funding and activities—for example, an annual report?

6. How many people work for the organization?
   a. Total paid staff? __________
   b. Volunteers? __________

7. What percentage of your employee and volunteer base lives outside Boulder County?

8. Organizations have many things to be concerned about besides disasters.
   a. Can you describe some of your organization’s major concerns and challenges, other than disasters [if applicable]?
   b. Which of these concerns do you find most worrisome?

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9. Is there anything else about your organization that you would like for me to know before I ask more specifically about experiences with the flood (if applicable)?

Next, I would like to ask about your organization’s experiences during (if applicable) and after the flood.

10. Where were you when you first heard about the flooding?
a. How did you find out about it?
b. How did your organization respond?
c. What were your greatest concerns initially?
d. Please describe your organization’s experiences during the flood. What were the most important challenges the organization faced during that time?
e. Did your organization continue to operate during the flood, or was there a period of interruption?
   [if service disruption occurred]
   i. Did the flood affect your organization’s normal activities, and, if so, how were they affected? How long did this last? Why?
   ii. When was your organization able to resume normal operations? How long did it take?
   [if service disruption did not occur]
   iii. How did your organization manage to cope and provide services during this serious disaster? Did you add new services?

11. What types of organizational relationships were most important prior to the floods (if applicable)?
   a. Could you further describe some of the relationships and collaborations you had with other agencies?
   b. What about after the flood? Were your organization’s relationships with other agencies about the same as before, or did they change? If they changed, can you describe those changes?

12. As a result of the flood, did your organization need resources above and beyond what you had on hand?

13. Did your organization provide resources to other organizations during this time? If so, which organizations and what types of resources?

14. In what other ways were you involved in flood response or community recovery efforts?

Now I’d like to talk about disaster planning at your organization.

15. How prepared would you say employees at this organization were to respond to this disaster (if applicable)?
16. Prior to the flood, did your organization have a written disaster plan (if applicable)? (if yes, ask for a copy of the plan)
   [if yes] …
   • Can you tell me in general what sorts of things the plan covers—that is, what parts of the organization’s response are spelled out in the plan? (Probe for mutual aid agreements, types of mutual aid that will be exchanged.)
• Did you find that the plan was useful in the flood? If it was useful, in what areas or with what types of problems?

[If yes and the plan was not useful or of limited use]
  ○ In what areas was the plan not helpful, and why?

• Can you tell me about when and why the plan was developed? How long has the organization had a written plan, and what were the reasons for having a plan? (Probe for: How long the plan has existed; Reasons why plan was developed, including prior disaster experience, requirements from funders, planning initiatives with other community organizations, leadership interest, etc.)

• Are there discussions in the organization about changes that may need to be made as a result of the flood experience?

[if no]…. 

• Were there other procedures in place that would help the organization prepare for a disaster like the flood? (Probe for other emergency procedures that were used in the flood)

• There can be many reasons why organizations don’t develop plans for disasters. I’m going to read a short list of possible reasons and ask you to tell me whether the reasons apply to your organization. Is there no written plan because (check all that apply):

  _____ It’s not necessary to have a written plan to know what to do during a disaster?

  _____ The organization doesn’t have other resources that are needed in order to develop a plan, such as money and special knowledge about what to do?

  _____ Are there other reasons for not having a plan that I have not mentioned?

16. a. Within your organization, is there a particular person who is responsible for disaster or emergency planning?

  _____ Yes  _____ No

b. (If yes) What is this person’s name and title?

__________________________________________________________________
c. (If yes) Is (name of person/are you) ______ a full-time or part-time employee?

_____ Full time      _____ Part time

d. (If yes) What percentage of (name of person/your) ______ job is dedicated to disaster planning?

__________________________________________________________________

e. (If yes) What kinds of things (does name of person/do you) ______ do as part of (his/her/your) job? (Probe for: writing plans; organizing drills, training, exercises; attending meetings with other disaster planners and organizations)

18. Is there information on disaster issues that you would like to have, but do not have at this time?

_____ Yes            _____ No

Now, in this last part of the interview, I would like to ask you to tell me about how the flood affected the clients/constituents of your organization.

19. You’ve talked about how the Colorado Floods affected your organization; now let’s talk about how it affected the people whom you serve.

a. How do you think the flood has affected your clients/constituents?

b. What were your clients/constituents’ biggest challenges during the flood?

b. Do you know if any of your clients/constituents were/are involved in response and recovery efforts, and if they were, what kinds of help did they provide?

20. How did you communicate with your clients/constituents about where to obtain resources following the flood?

21. What kinds of assistance did your clients/constituents need?

22. Where did you refer your clients/constituents?

23. Were there issues impeding your ability to connect your clients/constituents to services?
24. In talking with clients/constituents, have you heard about their experiences with agencies, organizations, and groups that were providing assistance of different kinds to disaster victims?  
   (If yes) Can you describe these contacts?  
   Were there experiences that were positive, negative, or what?  
   How were your clients/constituents treated by disaster assistance agencies?  
   Were you satisfied with their treatment? Did they feel that their needs were met?

25. Are there particular ways in which you saw your senior clients/constituents supporting local flood recovery efforts? How so?

26. Is there anything you would like to share about your clients/constituents and their experiences during and after the flood?

27. What are the key challenges that you think your clients/constituents will face with regard to flood recovery over time?

28. Do you foresee the need for any changes in your disaster planning or response on the horizon, given the shifting demographics of retirees (i.e., with Boomers beginning to retire)?

29. Is there anything else you wish to share about your organization, your clients/constituents, or your experiences during and after the Colorado Floods?

   End of Interview
APPENDIX B
SENIOR INTERVIEW GUIDE

Boulder County Resident Interview Guide

1. I’d like to begin by asking you some basic questions about your life here in (CITY NAME) before the floods. Could you tell me:

- Where you lived before the flood? How long had you lived there?
- What were your living arrangements—i.e., living alone, with spouse/partner, roommates?
- Please describe your social network prior to the flood. Did you have family or friends nearby? Did you interact with them much?
- How did you think about your community prior to the flood?
- Are there other details you can provide about your life and routines prior to the flood?

Next, I’d like to ask about the flood that took place last September.

2. These questions will concern your initial experiences with the floods and their aftermath.
   a) Where were you when first heard about the flooding?
   b) How did you find out about it—did you seek information?
   c) What were your initial thoughts? (Probe for clarification on how warning confirmation sought)
   d) How did you respond? Did you evacuate?
   e) What were your greatest concerns during this period?

3. Were you displaced as a result of the flood, even if it was temporary? (Probe for nature of displacement)
   [if yes] When did you leave your home?
   Where were you relocated?
   How far was/is that from your previous home?
   Was/is this location change temporary?
   How do you feel about the community there?

Please describe your experiences the first few days of the floods. What were the most important challenges you were facing at that time? Did you have problems taking care of:
   _____ Home repairs
   _____ Transportation
   _____ Financing
   _____ Meals
   _____ Moving
   _____ Cleanup
   _____ Contacting people (whom?)

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Other needs

4. Are there other things I haven’t mentioned that have been more challenging since the flood?

5. Did you need assistance dealing with any of the issues that resulted from the floods?

6. Did you feel comfortable requesting assistance if you needed it?

7. Did you attempt to find assistance or resources after the flood?
   [if yes] Where did you turn for help? What were the outcomes of those attempts?

8. Do you know others who sought assistance after the flood? What were their experiences like?

9. Do you feel that there were sufficient resources to address the needs of people, particularly seniors, who were affected by the floods?
   a. Who/what organizations do you feel have been most helpful in dealing with the aftermath of the flood?
   b. Are there organizations or people that you feel could have done a better job of addressing people’s needs? If so, how could they have done better?

10. What effect, if any, has the flood had on your relationships with other people?
    a) Has the disaster brought you closer together with anyone?
    b) Has the disaster caused or resulted in any conflict?

Now I’d like to discuss recovery efforts associated with the flood.

11. How would you describe what has been going on in the community since the flood?

12. Does the way you define and think about community differ from the way you thought about it prior to the flood? How so?

13. Have you been involved in the recovery activities, either through volunteering or otherwise providing assistance?
   [If yes] What were the details of your involvement? How did you become involved?
   [If yes] What kinds of situations were you confronted with?
   [If yes] What was were these experiences like for you?
   [If yes] Were there particular skills you brought to this work? Are these skills that you had developed prior to these activities? In what capacity had you initially developed these skills?
   [If yes] Did you develop new skills during your work on these projects? What were they?
   [If no] Is there some kind of volunteer activity that you would have become involved with if you’d had an opportunity?
14. Are there other things you have learned as a result of the flood?

15. Do you feel that you are recovering from this disaster?

16. Are there issues that you feel are hindering your recovery from the flood?

17. What party or entity is most responsible for the way you have experienced the flood and things that took place in its aftermath?

18. Would you look ahead a bit and tell me what you see as the potential long-term impacts of the floods for:
   a) You and your family
   b) Other seniors who were affected

Next, I’d like to ask how you think about and prepare for future disasters.

19. Have your experiences with the flood influenced the way you prepare for disasters? If so, how?

20. Do you know what you would do to respond to a future disaster if one were to occur?

21. What steps would you take to rebuild or recover if there was another disaster? How would you apply things you learned as a result of the flood?

Before wrapping up, I’d like to get your thoughts about community and social relationships.

22. What aspects of social life best reflect the extent to which older adults are plugged into the social world (e.g., their interactions with communities, friend and kinship networks, etc.)?

23. Do you engage with your community differently in as a senior than you did when you were younger? How so?

24. Are there other thoughts you’d like to share about the nature of social relationships in older age and how they relate to disaster preparedness, response, or recovery?

25. Is there anything else you would like to share before we finish?