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## Aging Disaster: Mortality, Vulnerability, and Long-Term Recovery Among Katrina Survivors

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### Abstract

Data from this multi-year qualitative study of the effects of Hurricane Katrina and flooding in New Orleans suggest differences in how the elderly cope with disaster. At the time of the disaster, the elderly of New Orleans were at greater risk than other groups, and more elderly died than any other group during the storm and in the first year after. Those who did survive beyond the first year report coping with the long term disaster aftermath better than the generation below them, experiencing heightened stresses, and feeling as if they are “aging” faster than they should. We offer insight on how we might define and characterize disasters, and illustrate that long-term catastrophes “age” in specific ways.

### Keywords

New Orleans; aging; disaster; long-term recovery

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Hurricane Katrina and subsequent flooding displaced more than 455,000 people from the Greater New Orleans area (Liu et al. 2006; Liu and Plyer 2008). Five years later, the most recovered neighborhoods are only 52% --72% rebuilt (Adams 2009a), and many who have returned have succeeded only partially in adapting to new, often compromised, daily routines. These include the elderly and African Americans, groups disproportionately affected by the hurricane and its aftermath (Kaiser Family Foundation 2007). Still, we are only beginning to learn about the experiences of people who survived Katrina in relation to long-term displacement and their ability to recover in the face of ongoing challenges, post disaster, based on age and race (Adams 2009a; Button and Oliver-Smith 2008; Igoe 2008; Kaiser Family Foundation 2007). In this essay, we draw from ongoing research among Hurricane Katrina survivors from New Orleans aged 40 to 98 to examine the long-term effects of this calamity and the role that age plays in relation to disaster.

“Aging disaster,” the double entendre of our title, refers to several related lines of analysis. First, we explore the uneven mortality of Hurricane Katrina: the elderly were the first and most numerous to die in the first year after the storm (Knowles and Garrison 2006; Stephens 2007; Spiegel 2006), and recovery differed for people in different age groups. Our title thus firstly refers to the fact that people experience disasters and their long-term effects differently, depending on their age. Secondly, our title suggests that disasters themselves ‘age’ in their human and material dimensions. We know that disasters precede and exceed the catastrophic events that define them, and this helps us to conceptualize disasters as themselves “aging” as their impacts linger on and continue to affect people in different ways. Exploring long term recovery helps us to conceptualize disasters as long-term events, requiring ongoing response. They are chronic in nature.

Studying disasters is not new to medical anthropologists. The most thorough reviews for anthropology are by Oliver Smith (1990), and for sociology, by Tierney (2006a), Rosa (2006), Rodriguez and Barnshaw (2006) and Stallings (2006). Despite a recurring characterization of disasters (especially by journalists) as random natural occurrences and as acute events affecting societies and individuals in socio-spatially limited and unpredictable ways (Birch and Wachter 2006; Bergal et al. 2007), there is ample literature on the predictable dimensions of all disasters (Daniels, Kettle and Kunreuther 2006; Wallace 1987; Erikson 1976, 1995; Congleton 2006; Steinberg 2003), and for Hurricane Katrina particularly (Cooper and Block 2006; Tierney 2006b; Freudenberg et al. 2009). Oliver-Smith refers to disaster as a *crise revelatrice* (“a revealing crisis”) in which “the fundamental features of society and culture are laid bare in stark relief by the reduction of priorities to basic social, cultural and material necessities” (1996:304). Disasters reveal social vulnerability, with ramifications for adjustment, recovery and long-term well-being (Erikson 1976; Wallace 1987; Oliver-Smith 1979, 1992, 1996; Klinenberg 1999, 2002; Hartman and Squires 2006; Brodie 1985). Community ability to recover varies by geographic location, class, race, ethnicity, gender and age (Tierney 2006a, 2006b; Hartman and Squires 2006; Pelling 2003), highlighting social inequalities, physical vulnerabilities (Fjord and Manderson 2009), or the trouble with the language of vulnerability (Fjord 2010) and failures in social justice (Cazdyn 2007).

Along with evidence that social conditions more than nature are responsible for disasters' impacts, an ample literature explores the long-term pervasive quality of disasters. Successful recovery is often directly proportional to pre-existing social status (Oliver-Smith 1990; Logue et al. 1981), income (Wagnild 2003), and extended family networks (Young 1954). In the US, race and age are especially significant: African Americans and the elderly are the hardest hit by disasters in terms of mortality (Gibson 2006; Jenkins et al. 2007-8; Campbell 2007-8) and recovery (Bolin and Klenow 1982-3, 1988; Kohn et al. 2005), as demonstrated by Hurricane Katrina (Dyson 2005, Giroux 2005, Fjord 2007).

The particular vulnerable of the elderly is reflected in experiences of evacuation, care and short term stabilization (Fernandez et al. 2002; Melick and Logue 1985-86; Rosenkoetter et al. 2007; McGuire et al. 2007; Campbell 2007), particularly during Hurricane Katrina (Gullette 2006; Gibson 2006; Brodie et al. 2006; Jenkins et al. 2007). The elderly also brought different coping strategies to bear on displacement, including resilience and spirituality (Henderson et al. 2010; Ramsay et al. 2010).

Post-disaster communities never return to their pre-disaster condition, but some people who live through (or with) them seem better able than others to put their lives back together (Tedeschi et al. 1998). Fjord and Manderson (2009) have shown how the experience of people who are disabled might recast understanding of disasters, since disasters leave affected populations as a whole in a state of disability. But notions of recovery are

problematic when they suggest anything like a return to normalcy (Oliver-Smith 1979, 1990). While the aftermath of disaster can provide impetus for positive changes on policy, and in communities and individuals, it can also result in ongoing inaction and unrelenting long-term debility. These insights suggest the need for an approach that uses notions of chronicity (Adams et.al 2009a; Fjord and Manderson 2009). Disasters often require major adjustments.

The literature on disaster also increasingly problematizes disaster discourse itself. Representations of disaster bring into existence new ‘preparedness industries’ (Lakoff and Collier 2008), paving the way for new, market-driven entrepreneurialism (Klein 2007) and justifying policies of social cleansing and redistribution that favor fiscal growth over social welfare (following Erikson 1976, 1995; Wallace 1987; Klein 2007; Giroux 2006; Gunewardena and Schuller 2008; Freudenburg et al. 2009). Disasters can be used to bring about policies that lead to authoritarianism and even genocide (Fassin and Vasquez 2008; Agamben 2003).

## A FOCUS ON AGE

A focus on age, as on race, ethnicity or class, also contributes to our understanding of the limits to post-disaster recovery and the ways in which mortality, morbidity, resilience and suffering are sometimes experienced as ongoing life catastrophes. We approach the disaster of Katrina as both a “revealing crisis” and a chronic problem—a phenomenon that might be discussed as a way of life for those who continue to live in and with disaster, since its effects, to date, are never absent or over. Although New Orleans may be ‘post-hurricane’—that is, the actual storm was time bound—the city is not ‘post-Katrina’ because the storm’s effects on human life are ongoing.

Our research is based on participant observation conducted by field researchers living in New Orleans, some of whom lived through Hurricane Katrina, on our analysis of archival, media and popular cultural sources, and on 163 interviews with hurricane survivors aged 40-98 (105 participants were 40-64; 58 of them were 65-98), who returned to New Orleans following the flooding. Semi-structured face-to-face interviews, lasting from two to three hours, began in March 2007. We also used a demographic survey to assess socioeconomic status and self-reported health status. Roughly half the study participants in the formal interview portion of the study were African-American and half were European American, and roughly half were male and half female. Interviews took place in the current residence of the participant. Each participant was interviewed up to three times over a period of three to four years, at intervals of six to eight months, enabling us to document evolving living conditions. Our analysis is based on coding of the interview narratives, statistical analysis of the demographic data, and insights from participant observation.

## VULNERABILITY AND MORTALITY AMONG OLDER ADULTS

The greatest mortality during and immediately after the 2005 hurricane and subsequent flooding of the Greater New Orleans (GNO) area was among the elderly. Those over age 60 – some 15% of the New Orleans population before the storm – accounted for approximately 75% of bodies found immediate after; 40% were over 70 (Knowles and Garrison 2006; US Census Bureau 2005). These high mortality rates can be attributed to several factors, including lack of evacuation facilities, infirmities that made evacuation difficult if not impossible, and high levels of poverty and isolation which increased their vulnerability in the face of social failure of emergency response (Gibson 2006; Jenkins et al. 2007-8; Campbell 2007-8).

## Evacuation

Few resources were in place to evacuate and transport the infirm elderly, or to take care of them in emergency shelters (Nigg et al. 2006). The story told by Howard, a 52-year-old resident of the Lower Ninth Ward, illustrates the experiences of those who tried to assist older people during the storm and flood. Howard lived with his 73 year old mother and mentally disabled brother in his own home. During the storm, he was also caring for his three young granddaughters. His home was five blocks from the section of the Industrial Canal where an unmoored barge broke through the levee, sending a tidal wave of water into the neighborhood, destroying it within minutes. He tried to evacuate his family:

On Sunday, the day before Katrina [after calls for a mandatory evacuation], we called up everybody in the car who could fit -- my mother who was 73, my granddaughters [ages 2, 3 and 4] and my cousin who was 62. So, we rounded up everybody we could, put them in the car, and sent them away thinking they'd be safe. They didn't have room for me. ...The road trip took 5 hours and they got only 30 miles away. Getting 30 miles away, sitting in a car, my mother was really sick. She was so sick that she thought she was going to die from the road trip. So, they came back home, and when they came back [to the home] at 3:45 in the afternoon I asked them all, 'What the hell y'all doing back?' Me and my brother figured we could fend for ourselves, but when they came back we got in the car and went straight to the Superdome. ...and when we got to the Superdome we were faced with very, very, very long lines. My mother couldn't take the road trip, and she sure couldn't take those lines, and so I asked one of the priests outside 'What can we do to get her inside?' [He said] to go to the back, to 'special needs.' 'Special needs' was a section that was supposed to have hospital beds, doctors, nurses, to take people like my mother. My mother had Parkinson's. She had a heart condition. She had all kinds of medical problems. So we thought if we went to the back they'd take her in, but they didn't have 'special needs' set up. So, they sent us back home telling us to come back later... but we didn't get a chance to go back. ...We got back home and as the day wore on, and as 6:00pm came, it got dark. As 8:00pm came, it started raining, then we lost the phone lines, then we lost cell phone lines, then we lost power, and we basically were sitting at home more worried about trees falling. And, then ... the water.

By eight in the evening, after the storm had begun, the Industrial Canal had given way. Howard was able to get his family into his attic and then, using an axe to crack it, onto the roof. But the house was torn from its foundation. His family perched on top of the moving slanted roof, and they floated to a truck. They piled into the truck, hoping it would be more secure, but the truck began to sink from their weight. Luckily, the truck floated to a brick house and Howard tried to get everyone onto the roof of that house. As he did so, his 2-year-old granddaughter and his mother fell into the water. His 4-year-old granddaughter jumped in to rescue her little sister, even though she didn't know how to swim. Howard was able to grab the hand of the 4-year-old and pull her back to the roof. The 2 year old was gone. His mother was pulled to safety by his brother, but died soon thereafter. They spent another nine hours on the roof, huddled together to stay warm, mourning the loss of one granddaughter and his mother. Finally, a small boat came by to help them. The owner took them to an empty freeway overpass, and they waited there with other stranded victims for three days before getting water or food or rescue.

Howard's story is similar to that of others, unable to leave the city because they were responsible for older adults who could not evacuate easily. Some elderly who attempted evacuation were stranded, left without food or water to die in exposed locations, as witnessed at the Superdome. People watched the bodies of elderly persons floating by as

they waited in an attic or on a roof; they witnessed the deaths of the elderly in the emergency centers. Howard's neighbor, Angeline, recalled:

You know, the only bad thing... in the water.... you have a lot of old folks' homes and the old people, and they had them on stretchers. All dead. They had a few under... They ran out of beds. [In the Superdome] they didn't even know they WAS dead. You know, but then one day you walk right by them and didn't even see 'em with a sheet over them. That's it. What more you can do? What else you can do?

Under state law, nursing homes were required to have safe evacuation plans, yet in New Orleans less than 60 percent were able to evacuate patients successfully (Norris 2005). Some nursing homes failed to implement evacuation protocols in a timely fashion; transportation resources were overloaded; and some accused FEMA (the Federal Emergency Management Administration) of stealing buses reserved for their use and re-routing them to the Superdome instead of to nursing homes. In some cases, nursing home administrators feared they would jeopardize frail elderly clients if they were made to undertake long bus rides, and so some decided to stay in what they thought would be a safer place. None could foresee that the levees would be breached. In the end, more than 150 elderly died in New Orleans nursing homes alone (Norris 2005).

About one year later, reports emerged of staff at one hospital having “euthanized” patients, many elderly, in a long-term critical care unit. Criminal investigations focused on the decisions of a physician; she was acquitted of the charges. The media coverage of the case stressed that hospital staff felt the need to make triage decisions about patients' survival chances, assuming they would not be able to be rescued (Fink 2009).

In addition, 65% of the elderly of New Orleans who lived in their own homes lacked transportation options to evacuate (Baylor College of Medicine 2006). Many were without family and, in some cases, without the mental or physical capacity to evacuate on their own (Baylor College of Medicine 2006; Gullette 2006). Those who were rescued described harrowing experiences. Evelyn was 80 at the time of the flood. We interviewed her in 2008, three years after the storm, in her new small and sparsely furnished apartment.

They come and got us in a boat from this home and took us to the building that my son owned...that I can remember. And we stayed there about two nights and they only come in the little canal with the boat and got me. They said they want to take me to safety but they didn't want my son. I said ‘Oh, I couldn't go without my son,’ so they took me to the I-10 [Interstate freeway], on the little canal. I climbed over the rail of the I-10 [actually a large cement wall], and I was 80 years old! But it was hard though, I was in the water...you know getting into the boat, climbing over the high fence... Friends say ‘You climbed over the I-10?!’ I said, ‘I had to’...I was in New Orleans in a boat and climbing over the I-10 at 80 years old. ... and I was always scared of water, never had a bathing suit in my life! Eighty years, I've never had a bathing suit. And you know... in a boat... I remember the I-10...Oh, that's all you needed...you get to that I-10 and you can beat them. Yes, that's all you needed. It was something. People were laying on I-10 dead. Children were crying. Oh, it was a horrible sight. I have never seen that on the I-10 in my life! Eighty years old. I've never seen that in my lifetime. The water came up so fast from that canal. We've never had that! We had storms, but we never had no canal burst open enough like that.

Shelter personnel far from New Orleans also reported inadequate facilities for caring for the elderly (Brodie et al. 2006). In the Houston Astrodome, where approximately 23,000 New Orleanians were sheltered, over half of all health services provided were for people 65 and older, but the care was reportedly inadequate (Baylor 2006). Here and elsewhere, medical

personnel and shelter volunteers found that dozens of elderly were demented, had severe physical and mental impairments, and/or were gravely ill and needed immediate transfer to more medically sustainable surroundings. That was not always possible. No elderly advocacy services were established. Some evacuees reported being treated “very well” in and out of state shelters, especially at church facilities where community members came with food, clothes or offers to take victims into their homes. Others – without family, resources or the wherewithal to obtain help – languished in shelters across the United States, falling into poorer health and sometimes dying before their families could find them (Baylor 2006).

The lack of government infrastructure for caring for evacuees, particularly the elderly, and the absence of effective communication systems for locating displaced (or dead) persons across the Gulf Coast and the nation, was a hallmark of Hurricane Katrina. Even by 2007, as our study was underway, it was difficult for us to locate elderly Katrina survivors in New Orleans, partly because many elderly chose not to return, or could not return, especially those who were very frail.<sup>1</sup>

### **Collapse of infrastructure and community**

In the first year after Katrina, makeshift volunteer facilities were set up in neighborhoods for people who began to return and who were living in FEMA trailers, and those facilities helped fill in the gaps in health care that could not be met by the few existing hospitals and their makeshift satellite clinics (DeSalvo et al. 2008). Clinical services, auxiliary services and pharmacies were few and far between. There was no public transportation to enable access. Some volunteer clinical centers set up house call nursing services, but they were not available in all neighborhoods and intensive interventions required transport to functioning hospitals. Many elderly people with chronic conditions simply did not get treatment for long periods of time; others were unable to receive regular check ups or obtain medications. Many died from lack of medication for chronic conditions, especially diabetes, hypertension, and asthma. People spoke of new life-threatening conditions too after the flooding, particularly respiratory disorders due to contamination from water and mold (see also CDC Oct 14, 2005). For some, physical illnesses multiplied, complications developed, and illnesses were made worse by the ongoing turmoil, displacement and incomplete recovery post-hurricane.

Wanda, who in 2008 had just moved back into her home after three years of living in a FEMA trailer, spoke of her losses – of her home, her relatives, her neighborhood, and her neighbors: :

Mr. Jackson—he's dead, he was in his 80's; and Ms. Jones, she died too. She was older too. Mr. Klevan, yeah, he came back and was trying to rebuild but he died last year from a heart attack.

Wayne, 49, who had finally gotten a job at a Marriott Hotel after a two year hiatus without work, noted that older people without family, who were incapable of managing the heavy demands of bureaucratic paperwork in order to receive insurance payments, Road Home monies or Small Business Administration funds to rebuild, were overwhelmed, and many simply “gave up:” “They died...because of depression and they are not getting their money for their property, the right deal, or no deal.”

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<sup>1</sup>Mortality among the elderly was higher than for other age groups in the first year after the storm, with demographic reports showing a downward shift in the median age of the city's population at two years post-hurricane (Frey and Singer 2006:12; Stephens 2007).

Many returning residents were still living in conditions of squalor and extreme discomfort in FEMA trailers on the lawns in front of their destroyed homes well into the third and fourth year post-hurricane. Those trailers were considered oppressive and uncomfortable to most of those living in them, particularly after many learned that the formaldehyde levels contained within them were unhealthy. As they recalled their once thriving neighborhoods and talked about family members or friends whose presence was now sorely missed, they emphasized the loss of community and their frustration with reimbursement. Bureaucratic obstacles presented by government and insurance companies lengthened residents' efforts to create normalcy in their world, to rebuild or to move into a partially rebuilt home, and to establish ongoing relationships with medical caregivers where such services were available. For those impacted by the post-hurricane battle for basic survival, the notion that some folks simply "could not recover" was palpable. They felt that the elderly who died in this initial period did so because of a sense of ultimate defeat -- their "life was over."

In sum, older adults suffered disproportionately during Hurricane Katrina, partly due to the vulnerabilities of chronological age and lack of supportive evacuation, medical and other infrastructure (Iverson and Armstrong 2008). They were also the most likely to die during the storm and floods and in the year following. Many older adults chose not to return to New Orleans after Katrina, but others did return, to be met with insurmountable conditions. In extreme cases, elderly persons with high blood pressure, cardiac conditions, diabetes, kidney disease and cancer were unable to receive regular care and were thus untreated. They died in circumstances that made recovery impossible.

## HOW AGE MATTERS IN THE LONG-TERM AFTERMATH

Disasters destroy lives, homes, families and infrastructures in ways that have long term or permanent effects. In the case of Hurricane Katrina and New Orleans, the continuous struggle for recovery and for a decent life amidst personal trauma, unsettled circumstances and lack of infrastructural support, along with recognition that things will never return to normal, reveal the intractability of disaster's effects (Adams et al. 2009a). Recovery certainly evaded most returning residents of New Orleans well into the fourth year following the hurricane. People who had returned to the city were dealing with ongoing ruin, displacement and hardship; for many, these features became a new way of life. This phenomenon was captured by one of our participants who said, four years after the storm, "Katrina never really ended." The event, Hurricane Katrina, became the open-ended experience, "Katrina."

### Government neglect, insurance company evasion

In the months and now years following the storm, returning residents dealt with frustrations from political and economic neglect, inefficiency and inadequacy. Federal funds provided through FEMA and Homeland Security to rescue and rebuild were badly managed and distributed by private sector corporations contracted to deliver this aid (Klein 2007, Adams et al. 2009a). The disaster itself a result of what Freudenburg et al. (2009) call The Growth Industry; and recovery was hampered by the privatization of recovery assistance. In more egregious examples, government contracted businesses built prisons to incarcerate New Orleanians who, for a full year after the storm, were suspected of being terrorists (Scahill 2005; Eggers 2009),<sup>2</sup> even while many communities remained without electricity, running water, road signs or any sort of basic government services. Insufficient city services remain in some places, now nearly five years post-storm.

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<sup>2</sup>Eggers (2009) provides the most vivid case of this in his book *Zeitoun*, documenting the incarceration of this Muslim man and others.

Programs set up to help finance victims' rebuilding efforts, such as the Louisiana Authority's (LRA) Road Home Program, and the Small Business Administration (SBA), were given to private companies that were hampered by unclear mandates and procedures. Those organizations delayed correspondence with many survivors regarding whether they would provide funds to supplement insufficient or non-existent insurance payments. Insurance companies often refused to pay for damage to homes that was due to flooding when homeowners only had coverage for storm damage. The process of filing and receiving public monies was especially trying for people who relied on more, yet received less public assistance, such as the elderly (Kilijanek and Drabek 1979). Many returning residents engaged in multi-year legal battles with insurance agencies.

Many returning residents were renters who, unable to find suitable and affordable housing post-Katrina, remained in FEMA trailers up through 2009 (Policy Link, 2007). Storm and flood displacement led to the permanent relocation of many renters, and the eviction of the poor from New Orleans was one of the most visible consequences of the disaster (Lipsitz 2006; Giroux 2006; Button and Oliver Smith 2008; Adams et al. 2009a).

Despite the fact that all New Orleanians were affected by the hurricane and floods, *age made a difference* in how people described their ability to cope, both in the initial aftermath and in the ongoing struggle for some semblance of normalcy. When studied over the long term, older adults who made it through the first years were actually more positive in outlook and the way they described themselves, indicating that the elderly were more resilient than middle-aged citizens in the face of the ongoing stresses of displacement.

### Elderly resilience

New life challenges emerged. William, age 77, four years post-hurricane was still living in his FEMA trailer in the front yard of his destroyed home when he told us how age mattered:

Well, see there's two things going on. There's recovery from Katrina and there is the aging process. And it's hard to tell which is which in terms of your emotions. I think the Katrina thing is not all gone, but it certainly is not as bad as it was two years ago. I mean the time I spent in North Carolina constantly on the telephone with one or the other insurance companies, FEMA, you name it, I spent all my time talking to these people trying to survive, at least that aspect, the financial aspect of my life - and of course, at that time I was 73 or 74, and it was hard. I'm much better off now than I was then in terms of the pressure, intense pressure. [I realized] maybe the smartest thing for me to do would be to say, to hell with it. I don't need that extra ten- or fifteen- or twenty thousand [dollars].

William's narrative expresses the way he and other elderly learned to accept and adjust to loss. Frustration over the struggle to recover against obstacles is mitigated by his sense of resolve to take it in stride. William offers a complex story in which the difficulties of aging merge with the challenges of post-hurricane life, but in which adjusting to this life is like adjusting to aging itself.

Older adults who returned to New Orleans and were able to survive the first years post-hurricane made it clear that they were not defeated by the problems the disaster posed, even in the face of illness or disability, and even when their socio-economic circumstances had declined precipitously. They showed resilience – the ability to “weather adversity—to steal oneself, and move beyond it” (Hildon et al. 2009:36) – in coping with the ongoing stresses of recovery. They were able to take a comparative, long-range view of their situation, often stating that they had “lived through other hurricanes” and through “tougher times” that, they felt, were more psychologically destructive than Hurricane Katrina.



Nancy, a 72 year old resident who lost the home she and her husband owned for 18 years explained that they now live in a small shotgun home in the area of Faubourg St. John. “Although it’s a financial burden to rent,” she told us, she was not willing to buy another house after losing hers in the hurricane. The task of finding a house to replace her family home seemed too daunting, and she and her husband felt that by renting, they’d avoid living in perpetual fear of losing another home. Although she missed the possessions she lost, she’d made peace with all that. Compared to other hardships, Katrina was not going to destroy her, she said:

One of the things that has helped me deal with this tragedy, or trauma, or whatever you want to call it, is that we, in my opinion, in my emotional state, we had had worse. So compared, for me, this is no comparison to a death of a child. And that’s what we were going back to. ...[R]emembering the grief and the emotional pain, we just took this as... not the... it wasn’t as painful, wasn’t as great or intense a loss as this was. I could live with this... I had been through something worse.

The elderly who drew on a repertoire of comparative life traumas or challenges perhaps had what Kohn et al. (2005) called an “inoculation” from prior trauma and struggle -- emotional protection against the deleterious physical and mental effects of this catastrophe. Alice, a 65 year old returning resident who lost her home in St. Bernard Parish, now lived alone in a condominium across town. Alice wasn’t totally pleased with her move because her new home was too small for large family gatherings, but this was part of getting older, she said. She compared it to other disasters:

Now I have to tell you ... because I lived through Betsy and other storms....we would just weather the storms. [I’ll] give you some background on how older people think about these storms.. You just know what to prepare for. ... ‘This is just gonna be another storm’, they’d say, and, ‘Why leave?’

### **Resilience, self-reliance, and values**

Those elderly who did not perish as a result of the flooding, exposure, or illness in the first year post-hurricane were able to focus on “making the best of it,” in part by realizing that it was not the first time they had dealt with hardship and adversity. Not surprisingly, the older the person, the more comparative life experiences they were able to bring to the task of adaptation. This was particularly true for African American elderly who felt that life’s hardships in general prepared them for the hardship of post-Katrina life. Elvelina, 89, lost her home; four years later she lived in a mother-in-law unit attached to her daughter’s rebuilt house. She explained that the current disaster was just one of many challenges that she had learned to live through:

I think I’ve been lucky not to get too disturbed, ...I just tell myself—well if this is the way it is, then learn to accept it. As a child, I can remember my mother had nine children and it was very hard. We lived in the country during the depression. I remember that. I had to live through that. I didn’t have this or I didn’t have that. ... I made the best of it. I mean, now I have another nice bed again. I was lucky enough to get one. So I think that when you don’t have everything, like all the people have now, they have everything. They don’t know what it is. ...And here I am each day. I mean, I’m gonna be 90, so each day is a good day for me.

Becker and Newsom (2005), in their study of health disparities, identified the resilience of older adults along racial lines, referring to African Americans’ greater ability to rebound in the face of health care disparity as the “survival arsenal” built into the value system and ethos of being African American in the United States. Overcoming adversity emerges from a cultural inheritance of knowledge about the history of slavery, continuous racial oppression, and the need for self-reliance. “The Sojourner Syndrome,” they note, is based on the story of

Sojourner Truth, suggesting “a behavioral strategy for survival used [particularly] by women, involving extraordinary role responsibilities” and resulting in a form of resilience in which women are able to care for others and themselves amidst and despite extraordinary challenges of deprivation and structural inequality (2005:215).

Almost all returning residents spoke about the perceived need for self-reliance post-Katrina, and linked resilience to prior familiarity with government ineffectiveness, racial discrimination and unfair treatment. Across ethnic and racial lines, older adults coupled their talk about the unique traumas of Katrina with talk about how this situation was in many ways “nothing new.”.

Resilience garnered from previous life challenges, and recognition of government ineffectiveness, was accompanied by resilience that derived from an assertion of primary values in face of material loss. Material losses, many older adults said, were not enough to undermine their sense of well-being, and they emphasized the value of family and simple pleasures over material wealth. Katherine, 70, still living in a FEMA trailer three years after the storm, told us:

I didn't have a whole lot of trouble letting go of things. I guess it's because I'm older. Maybe if I were younger, I'd have felt different. But there's only so much stuff you need. You need very little. And I really – I was glad that I had the experience of finding out that you don't need all that stuff.

Although the oldest adults were hardest hit by the disaster and least likely to survive in its immediate aftermath, many said they could cope with the long term effects of displacement by remembering they had survived previous life challenges and knew they could survive, and be happy, with less material wealth.

### **Middle-aged burden amidst uncertainty**

In contrast, middle-aged study participants spoke of high levels of stress and feeling as if they might “break” from the frustrations of failed recovery. George, a 42 year old carpenter who was living in the lower Garden District, explained that his neighborhood did not flood, but that he lost the roof on his home and sustained severe damage to two rental apartments that provided his family with additional income. In 2008, he was still trying to salvage and rebuild his own home, while trying to fight legal battles with insurance companies and the Louisiana Road Home program for both his own and the destroyed home of his 70 year old mother, and while trying to keep his business going:

I definitely have been feeling more depressed recently, with just looking at the sheer volume of work that I've had to do... I've gotten tired of—I guess burned out is the way to put it—still burned out. It might just be the way I'm doin' the business, but I feel like... a lack of support. ...I guess the trapped feeling may be applicable. Just, kinda' hemmed in. I'd like to think that I could sell my house. I'd like to think that there was another opportunity somewhere else. I d like to think that things are going to get better here, and I'm not sure about any of that stuff. There's a lot of uncertainty, insecurity. I feel insecure. Maybe that's how to put it. It's a very big sense of insecurity here. I don't...like talking about the kids... a lot of that's feeling insecure. You don't know what they're gonna do. Yeah you just don't... It's just bad...uncomfortable.

His neighborhood remains only partially inhabited. Many homes have ‘for sale’ signs posted in front of them and look derelict. George's house is across the street from a park, undamaged by the storm, which was completely destroyed by FEMA to house a trailer park. That project was abandoned by FEMA before completion. Four years later, the once beautiful park remains a four-block mud puddle with uprooted trees and bushes.

Alison, 49 when we met her three years post-hurricane, reported that the stress of ongoing displacement was taking its toll on her body. She had eczema and had gained a great deal of weight since she returned post-hurricane to New Orleans. She had had “a few nervous breakdowns,” she said, caring for her two children and trying to rebuild her home, her neighborhood and her life, with no support beyond that of her immediate community:

What we're taking on...we don't realize what we're taking on, on a day to day basis... it's affecting us. Because many articles have been written about mental health and one of the big concerns is that depression is the norm here, and people are accepting it. [You hear] 'I'm supposed to be depressed. It's the norm. We're supposed to feel this way. Don't we all feel this way? This is normal!' And, everyday we think this trauma, this crazy pace, all of these things that we deal with, are normal. 'Cause I've been doing it for two and a half years and so, and it's not stopping. ...I went to a neighbor's house to see her. She's a little schizophrenic. I start peeling off the layers. There's always layers to every situation. She was rescued off the roof with her mom. Her mom died after the storm. This woman was obviously a little simple before the storm, only lived with her mom in a little simple world. And there is nobody now. I found out just the other day. I thought she was 60. She's 33. That's how old she looks. No teeth, wrinkled. Straggly. This is big, that kind of stuff. And then you come back and you call FEMA and they won't give you a trailer anymore for her. And they won't sell you a trailer because of the formaldehyde issues. So, she won't leave the house....

Robert was 56 and still living in his FEMA trailer in 2008. He told us that relatively young adults were developing health problems from the ongoing inability to recover:

Younger people are dying from heart attacks now. I think it's the stress, cause like I said I'm stressed out... I feel my body... I feel my health changing because of the stress I'm under. I can tell my health... yes, I have these pains. I've been to the hospital and they think it's my heart, you understand? I've been having an irregular heartbeat but I know it's the stress that caused it because I wasn't like this before. You understand? Before Katrina, I could sleep some but now I need help to sleep, “cause if it's not the pills, I need a beer and a pill, you understand? And I'm not going to lie, I really do. Yes I take those pills and I drink sometimes. Yes I do.

For returning residents in the “sandwich” generation--those who were burdened with the multiple tasks of rebuilding, finding jobs and working and caring for children and parents simultaneously--adjustment and attempts to achieve some inner equilibrium were frequently not achieved. Rather, these adults faced multiple challenges with a sense of futility and fear that they would “break” under the pressure. Those responsible for taking care of others talked at length about weight gain, a return to smoking and drinking, and developing asthma, allergies, high blood pressure and anxiety disorders. Many middle-aged study participants, both men and women, cried during our interviews--far more frequently than did elderly participants--as they recounted their struggles and current circumstances.

In some cases, middle-aged informants would cancel interviews, telling us they were “having a bad day,” and indicating that they could not cope with discussing their ongoing dismal situation. They were embarrassed to be living in trailers, still. Marriages fell apart, and some participants talked about not being able to “see the light at the end of the tunnel” anymore. They talked about how they might have had a sense of hope in the first year after the storm, but by their third or fourth year of trailer living, they wondered if there would be any sort of good end point, if they would ever recover.

Shandra, who was 43 when she spent the first six months post-hurricane displaced in Texas, said she decided to return to New Orleans because the stress of being away from home and

the feeling of discrimination -- because she was from New Orleans -- was too great to bear. Despite the fact that she was given only a FEMA trailer and a Small Business Administration loan for \$40,000 (an amount that would not rebuild her home), she felt that returning would be better than remaining in Texas. Her trailer was so cramped she had to turn sideways to move from the kitchen area to the bedroom, and she could not take a bath because she could not fit into the tub. After two years there she told us:

Some days I just want to scream. I was angry. I was angry at the world. Why is this happening? Then I just settle down and pray. I pray, asking God thy will be done please help me. It's a lot of days in this little bitty old trailer. All I do is boo-hoo. All I do is put my hands in my face and just cry and cry and cry uncontrollable. Uncontrollable. It's depressing, I mean I'm 45. I had accomplished so much... I had accomplished so much to have it all taken away from me, which is nobody's fault and then have to start... I mean... You go in the kitchen thinking you have one [a kitchen] and you don't. It's all gone. You have to start all over again. But it's going to be ok; it's going to be ok. That's how I look at it. It's ok I say today, and tomorrow I cry.... I'm still having blood pressure problems and I know its behind [because of] stress, I know it's behind stress. You get all these little different aches and pains and headaches you don't really understand what it is, but it's stress. It's too much sometimes, not knowing what's going to happen. You lay in bed thinking 'What's going to happen in two months, what's going to happen in three months? How long will I be able to live in this trailer without dying? And I'm awake.

For middle aged returning residents, the depression of failed recovery was tied to heartbreak over the loss of so much. Shirley, 42, told us:

There's a lot of people who have been dying of heart attacks. People in their 30-40s... the stress. People had no stress or not much before..... In the morning I get up and walk. People handle stress in different ways. But, right after the storm ... people were dying of heart attacks. Mothers burying their young daughters. We heard that a lot. The stress was killing a lot of them people..... A lot of people were heartbroken. They had to move. A lot of people had never left the city. A lot of people actually never traveled. They grew up and died, born and raised and died in the city. There was a lot of heartache. There was a lot of heartache. You don't hear that much about it, but still when you look in the obituary there's a lot of deaths. Younger people dying of stress and heartbreak.

The effects of Katrina were felt too in rising rates of depression and mental illness (Sastry and van Landingham 2009; LaJoie et.al 2010). The effects pervaded every aspect of the lives of those trying to create a reasonable existence under conditions that were chronic. Middle-aged adults expressed feeling the burden of this pervasiveness in their bodily ailments and declining health more than our elderly respondents, and those feelings led several of our middle-aged interviewees to say, "Katrina aged me."

Many middle-aged persons often felt they had to continue to fight bureaucratic battles in the hope of rebuilding a normal life, no matter how long it would take or how elusive that rebuilding effort seemed. Those who talked about aging faster than they should attributed that feeling to the lack of resolution in their economic circumstances and their feelings of bodily and emotional stress. Of all our study participants, most of those who reported to be coping poorly with the ongoing disaster were middle-aged. They felt they had lost "too much" and that they were never going to dig themselves out of their hole.

Unlike the oldest adults who had resigned themselves to making it on their own without government help, those under age 65 were more likely to feel that, in order to survive, they had to continue to fight the government and insurance bureaucracies to obtain even the

smallest amount of aid. Increased care-giving responsibilities, insufficient medical and other services and the resulting decline in health left many middle-aged adults with a sense that their bodies and lives were breaking down under the strain of unending adversity.

## CONCLUSION: AGING DISASTER

Parsed along lines of age, both the mortality of the elderly and the resilience of the oldest participants in contrast to those in middle age further our understanding of how ongoing disaster has differential effects over time. Overall, the increase in ill health and anxiety that middle aged victims articulated contrasts with the psychological resilience reported among the oldest victims with whom we spoke. How do we make sense of this difference in relation to disaster itself? The responses of both groups point to the ways in which disasters need to be understood in their varied contours as long-term and pervasive rather than as short-term and limited. Although many of the oldest adults died as a result of the hurricane and lack of support in its immediate aftermath, over time the elderly who survived were able to approach the disaster with a long view, comparing its impacts to those of other traumatic events in their lives. Individuals in this group claimed not to have recovered, but rather, to have “made the best of” the challenges and frustrations that arose. They noted that ‘Katrina’ was not going to end. Rather, it became part of life, for some, like aging itself. In contrast, middle-aged victims with the responsibilities of care-giving, rebuilding and generating income had a harder time in the face of those demands, resulting in sharp declines in health, mental illness and a sense that they were prematurely aging. Morbidity caused by the ongoing disaster shifted from the elderly to younger adults over time.

The difference in the experience of Katrina between the older and middle-aged adults can be attributed partly to the failure of the state to provide caregiving, a hallmark of this particular disaster. Older people were hit hardest by the absence of effective services during the catastrophe of the storm and floods. Those in the caregiver generation suffered most from the retreat of state recovery support in the years after. In their attempts to provide the services needed to keep their families afloat and their communities functioning, middle-aged adults spent the post-hurricane years filling in the gaps created by a recovery process that was stalled.

Our comparative findings emphasize that lack of recovery support, before and after catastrophes, is tied in the US to larger social structural relationships that cannot be fully explored here. Focusing on age in relation to disaster helps us to see how these structural effects play out unevenly across the population. In the case of Katrina, “aging disaster” highlights mortality, resilience and the persistence of the trauma of the disaster which might itself be seen as “aging.”

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