

# Denaturalizing Disaster: A Social Autopsy of the 1995 Chicago Heat Wave

*Eric Klinenberg*

It's hot. It's very hot. We all have our little problems but let's not blow it out of proportion . . . We go to extremes in Chicago. And that's why people like Chicago. We go to extremes.

Chicago Mayor Richard M. Daley

During my residence in England, at least twenty or thirty persons have died of simple starvation under the most revolting circumstances, and a jury has rarely been found possessed of the courage to speak the truth in the matter . . . The bourgeoisie dare not speak the truth in these cases, for it would speak its own condemnation . . . The English working men call this social murder, and accuse our whole society of perpetrating this crime perpetually.

Frederick Engels, *The Condition of the Working Class in England*

On June 30, 1995, the front page of *Morbidity and Mortality Weekly Report*, a journal of the Centers for Disease Control and the US Department of Health and Human Services, featured a report attributing 5,379 American deaths in the 13 years between 1979 and 1992 to excessive heat. Deaths from the heat, the journal concluded, "are readily preventable." Public health experts know the risk factors associated with heat related illness and mortality as well as the procedures responsible parties can take to reduce them. The report lists this information and advises local officials to use it when conditions warrant intervention.<sup>1</sup>

Less than two weeks later an unusual weather system hit Chicago with one of the most severe heat waves in its recorded history. Temperatures reached 106°F; the heat index, or experienced heat, climbed to 120°F; uncommonly "high lows" (daily low temperatures that were them-

selves dangerously high), sparse cloud cover, and a dearth of cooling winds kept the city broiling, without relief, for a full week.<sup>2</sup> Although baseline temperatures were slightly less hot than some of Chicago's heat waves from earlier summers, the combination of these climatic conditions posed a serious threat to the health of the metropolitan community.

Chicago was totally unprepared for this attack of the elements. The heat turned deadly on July 13, and local media stepped up their coverage of the morbid outcome the next day, when two toddlers suffocated after the director of their daycare center inadvertently left them locked inside her truck for hours at a temperature of 190°F. These deaths initiated a week of suffering so massive that many residents and city officials refused to comprehend or accept that it had happened. By the end of the week, though, few could deny that the city had

witnessed a disaster of historical proportion: medical examiners confirmed that over 500 Chicagoans had died directly from the heat, public health workers reported over 700 deaths in excess of the weekly average,<sup>3</sup> and hospitals registered thousands of visits for weather-related problems.

What no one has established, however, is that the processes through which Chicagoans lost their lives followed the entrenched logic of social and spatial division that governs the metropolis.<sup>4</sup> Journalistically constructed and conventionally remembered as the city's most deadly natural disaster, the destructive 1995 heat wave was, in fact, a sign and symptom of the new and dangerous forms of marginality and neglect endemic to contemporary American big cities and notably severe in Chicago, a structurally determined catastrophe for which sociological analysis illuminates not simply the obvious relationship between poverty and suffering, but some of the institutional and social mechanisms upon which extreme forms of American insecurity are built. The Chicago disaster reveals several forms of precariousness as of yet unmentioned or underdeveloped in the emerging debate on the new urban poverty,<sup>5</sup> including the literal social isolation of poor seniors, particularly in the city's most violent areas; the degradation of and rising conflict in urban hotel residences, which constitute a large but generally unmentioned sector of the low-income housing market; the changes in public service delivery and the threats to public health stemming from privatization and other radical shifts in local government administration; and the new social morphological conditions of neighborhoods abandoned by businesses as well as the state and depopulated by residents.<sup>6</sup>

The unprecedentedly high mortality figures in the 1995 heat wave substantiate the dangers of current urban conditions: the excess deaths per 100,000 city residents were greater in July 1995 than in the notable heat waves of 1955, 1983, 1986, and 1988, and only the 1955 heat wave came close to a mortality rate as much as half that of 1995. After nearly thirty years without a significant heat disaster, the series of deadly heat waves that begins in the early 1980s suggests that there is a connection among state retrenchment, rising fear of violence, and vulnerability. The climatic conditions in 1995 were more dangerous than they had been in earlier heat waves, but the 1995 disaster would not have been so deadly unless the condi-

tions of the city's most precarious residents were more dangerous as well. In fact, *scientific studies show that the differences in the mortality rates between the 1995 and earlier heat waves are not natural; that is, they are not attributable to the weather.* [...]

This sociological account of the heat wave shows how the climate, the living conditions of the city's most precarious residents, and the local government, the organization most responsible for protecting the welfare of citizens, interact to determine the level of danger and damage that a disaster such as the heat wave inflicts. In 1995, the city's climatic, sociospatial, and political conditions were all extreme: not only was the weather unprecedentedly severe, in addition the advancing state of poverty and the inadequacy of the state's response created an unusually deadly crisis. [...]

At the heart of this account is the making visible of violence that is otherwise misrecognized, the exposure of a political economy of symbolic violence and thereby opening of new spaces for analytical and political work. This project is most systematically pursued in the work of Pierre Bourdieu, who has empirically shown the obscured machinations of power in such diverse areas as the world of art, the educational system, and the architecture of the home. In his recent work, Bourdieu has focused on two key sites in the production of symbolic domination, both of which are central to the disaster model: the state and the journalistic field. In the early 1990s, when he was developing his work on the political field, Bourdieu argued that state has a unique "power to constitute and to impose as universal and universally applicable... within the boundaries of a given territory, a common set of coercive norms" and categories.<sup>7</sup> Pushing Weber's famous formulation, Bourdieu claimed that the state is not merely the holder of a monopoly on legitimate physical violence, but over legitimate symbolic violence as well. To trace this violence, Bourdieu departed from most political sociologists by examining the effects of the state outside of formal political institutions and organizations, in the places where it is least recognized but perhaps most potent.<sup>8</sup> Although they seem unlikely subjects for political sociology, naturalized disasters represent a promising domain for locating the work of the state. Bourdieu has also recognized that the media now share the role of legitimating symbolic violence with the state. [...]

### Urban Onslaught: The Mounting Spectacle of Death in the City

Chicago: Tuesday, July 12; sunny and still; temperature near 100°F, heat index 102°, the streets ablaze; the air sticky, almost thick enough to chew. The heat came *announced*. Forecasters, watching the warm air rising from the South, predicted a hot spell several days before Chicago cracked 90°, and local television news broadcasts warned of an imminent "summer sizzler" through the night of July 11. [...] Some Chicagoans were prepared, others acted quickly to protect themselves. Stores carrying air conditioners and fans sold out their supplies by the afternoon, leaving teams of eager shoppers on long, fruitless searches for home cooling systems. City dwellers swarmed the beaches: 90,000 crammed a modestly sized downtown beach alone. [...]

But Chicagoans needed air conditioning to survive such extreme heat, and as the city got its fix on artificial cooling its demand for electricity reached an all-time high, totally overwhelming the normal capacity of Chicago's utilities provider, Commonwealth Edison (Com Ed). Com Ed was not adequately prepared for this soaring use of power and its equipment broke down precisely when its customers most needed energy. Com Ed's generators began failing on Wednesday and continued to malfunction through the weekend. Friday, after the three consecutive days of record-breaking energy consumption and a sweeping series of power failures around the city, two large circuit breakers went out at the Northwest station within an hour. Disarray at the utility company left some communities without electricity – and therefore without air conditioning, fans, elevators, refrigeration, and television and radio for two days or more, and the temperature never moderated.

Thursday the thirteenth was Chicago's most uncomfortable day. Some regions of the city reported temperatures of 106° and heat indices as high as 126°; indoor temperatures in high-rise apartment buildings without air conditioning topped 115° even when windows were open; and school buses, trapped in mid-day traffic while carrying children on summer field trips, grew so hot that dozens of young campers, weak and nauseous from heat exhaustion, had to be pulled out of the stuffy vehicles and hosed down by fire department workers to prevent them from passing out. Massive water treatments were a survival technique the

emergency workers might have borrowed from inhabitants, especially the young, of the poorest and most underserved areas of the city. These Chicagoans, the most likely to lack access to cool spaces, had no choice but to open their neighborhood fire hydrants, creating public fountains and turning the streets into waterparks, oases where the able-bodied could transform deadly conditions into spaces for frolic and relief.

But this popular survival strategy among disadvantaged urban dwellers otherwise trapped in the heat has a dangerous unintended effect: massive use of fire hydrants as cooling devices depletes local water supplies – enough, in extreme cases, to leave entire communities without running water for extended periods. On Thursday, the hottest day in city history, Chicagoans opened over 3,000 fire hydrants, consuming so much water that several neighborhoods lost almost all of their pressure for hours or more. Television news reported that the city was fighting a "water war": over 100 crews circulated through Chicago to close the hydrants and police threatened anyone caught tampering with emergency water sources with a \$500 fine, but people in the streets persisted, using acetylene torches, sledgehammers, power drills, and saws to generate a flow of water. Threatened with the possibility of losing their best source of relief from the heat, groups of youths "showered nine water department trucks with gunfire, bricks or rocks... and caused minor injuries to four workers" who tried to seal the hydrants.<sup>9</sup> This violent struggle for such a basic resource was truly tragic, for these deprived communities would lose no matter what the final result. If sealing the hydrants would have helped overheated residents regain water pressure, it also would have meant submitting to the more dangerous pressures imposed by the limited resources of the neighborhood and the intensity of the heat. [...]

Saturday was massively deadly: 365, or 293 over the norm, died in one day; Sunday, with 241 mortalities, was almost as bad; Monday the rate had dropped, but only to 193; Tuesday it hovered 34 above the norm, at 106; and for the next two days it remained 20 above average (see Figure 38.1).

This profusion of death overwhelmed the morgue, where on average medical examiners see 17 bodies a day and storage facilities as well as staffing levels are designed to accommodate this

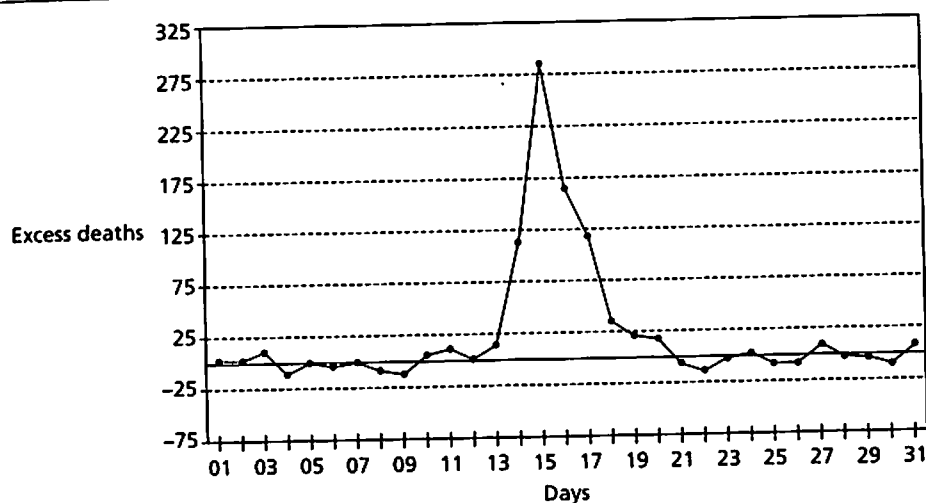


Figure 38.1 Estimated excess mortality, Chicago residents, July, 1995. Source: Steven Whitman, Chicago Department of Health

load. [...] Recognizing that the soaring death toll could bring chaos to his office, Dr. Edmund Donoghue, the county's Chief Medical Examiner, made emergency arrangements to handle the excess bodies: a fleet of 48-foot-long refrigerated meat-packing trucks, volunteered by a civic-minded owner of a local trucking company, was brought in to hold the bodies as medical workers raced to complete their autopsies. At the height of the heat wave's destructiveness 10 large trucks, along with a traffic jam of ambulances, police wagons, and fire department vehicles used to deliver bodies from around the city, television and radio vans, and health workers' cars crammed the area surrounding the morgue, forming a parade of death so enormous, so surreal, that it seemed impossible to believe that this was happening in the center of the city.

#### Locating the Symptoms: An Anatomy of Urban Suffering

During the heat wave, geography was linked to destiny. The processes that killed so many city residents were concentrated around the low-income, elderly, African-American, and more violent regions of the metropolis, the neighborhoods of exclusion in which the most vulnerable Chicagoans make their homes. Similarities between maps of the heat wave's deaths and maps of ethnoracial and class division reveal the social and structural underpinnings of the event. [...] Read

against the history of ethnoracially driven battles for control of space at both the state and street levels – ranging from Chicago's urban renewal and public housing programs to the race riots in which white communities attacked African Americans who tried to move into predominantly white neighborhoods<sup>10</sup> – this ring of death perfectly expresses the human cost of long-standing ethnoracial exclusion in the metropolis. [...]

The demographics of mortality also fit a pattern – this one familiar to public health researchers and practitioners – predicated on the age, gender, and ethnoracial status of city residents. (See Table 38.1.) Seventy-three percent of the 525 Chicagoans whose deaths were medically confirmed as “heat-related” during the month of July were over 65 years old; the death rate for seniors above 65 was 16 times higher than the rate for those under 65. Race and ethnicity mattered also: non-Latino blacks were almost twice more likely than non-Latino whites to die of the heat. Although African Americans make up 39 percent of the city population and African-American seniors represent less than one-third of Chicago residents over 65, black seniors constituted 45 percent of the deaths for Chicagoans 65 and over, and non-elderly blacks, who accounted for 59 percent of all deaths among those under 65, died even more disproportionately. Latinos, though, who number about 19 percent of the city population, represented only 2 percent of the overall mortality. Men died in greater numbers than women; they

were 2.5 times more likely to die because of the heat.<sup>11</sup> [...]

**"Government alone cannot do it all":  
City Services in the Empowerment Era**

[...] Given the entrenched American history of city governments' unresponsiveness to the needs of poor communities, it would have been surprising if the local Chicago government had effectively protected local residents during the crisis. As organizations, city governments function poorly to secure the welfare of people in need, and they do so only in unusual circumstances.<sup>12</sup> In the current structure and spirit of local government, the state is even less willing and able to provide key services to marginalized residents. [...] Chicago's political machinery all but broke down when its most precarious patrons needed it most.

During the heat wave several city departments failed to provide services that, had they been activated, would have saved hundreds of lives. [...] The Mayor's Commission on the heat wave insists, "government alone cannot do it all,"<sup>13</sup> and residents themselves must take responsibility for securing their own welfare and keeping themselves out of hospitals and other places that provide public assistance. In most American cities, local governments now claim that their role should no longer be that of universal provider, but of enabler.<sup>14</sup> Appropriating the discourse of empowerment as a moral justification to abandon poor communities, state administrators and politicians, convinced that the best way to protect the poor is to force them to protect themselves, are relinquishing responsibility for many of their services to the people least able to provide them. The rapid introduction of market operating principles

and discourse into the public sector has facilitated this process. People in need are now considered consumers of public goods in a competitive market rather than citizens entitled to benefits because they are members of a political community. As consumers, they are expected to provide for themselves in the available market of services. Yet poor, infirm communities are likely to be poor consumers of public services, in part because they have less access to information and thus a limited set of choices from which to choose. [...]

Between July 13 and 16, 23 of 45 hospitals in the city network went on bypass status, whereby they refused to accept new patients for emergency care because they were using all their urgent-care facilities. In one period 18 hospitals went on bypass status at the same time, making it impossible for residents in the most affected areas to receive timely medical attention. [...] With so many emergency rooms shut down and no central program to notify ambulances when and where hospitals closed or reopened, people in need of emergency treatment were shuttled from area to area until their driver could find an available facility, and ambulances were so tied up that at least 55 emergency cases went unattended for more than 30 minutes, a response time the city itself considers totally unacceptable. The medical systems in poorer areas of the city, long insufficient for the needs of the local population but reduced even further by cuts in public health programs since the 1980s, all but collapsed under the pressure of the heat.

Many of the Chicagoans who died or required emergency care during the heat wave were no doubt among those who, failing to master the system, became, in the state's logic, their own victims.

**Table 38.1: Total heat-related deaths by age and ethnoracial status, Chicago residents**

Age	Non-Latino white	Non-Latino black	Non-Latino other	Latino	Total
< 55	27	39	0	1	67
55-64	25	45	1	4	75
65-74	62	64	0	1	127
75-84	90	66	2	1	159
85+	28	42	1	2	93
Total	252	256	4	9	521

Source: Chicago Department of Public Health.

### Home Alone, Home Afraid, Home Sick: The Rise of Literal Social Isolation

In the city's official view, however, real fault for the health crisis lay in the hands of the poor and isolated seniors who, when contacted by neighbors or service agencies, did not heed the instruction to leave their apartments and find air conditioning or at least to open their windows and doors. According to the Mayor's Commission, this showed "that those most at risk may be least likely to want or accept help from government,"<sup>15</sup> but in fact it exemplified the extent to which public agencies and officials, who by out-sourcing service provisions to private contractors increasingly distance themselves from impoverished areas of the city, have failed to recognize the level of insecurity and the depth of deprivation in the most distressed communities. Ground-level scrutiny of the everyday world of Chicago's most precarious residents reveals that they did not refuse to leave their homes because they do not want or are unwilling to accept help from government, but because the proximate social and spatial conditions in which they live make it unacceptably difficult or risky to leave their apartments.

The advancing deterioration of neighborhood infrastructure has been particularly damaging to the city's poor elderly, thousands of whom have responded to the environmental changes by barricading themselves in their small homes, using their walls to protect themselves from a world they perceive as too threatening to enter, all but abandoning a society that has thoroughly abandoned them. Seniors who are trapped within their own residential units represent an emerging group of thoroughly marginalized city residents – the *literally socially isolated* – who, according to several case managers who work with them, rarely leave their residential units, have little contact with family and friends, and, because of cutbacks in public health and transportation programs (essential for bringing them to health providers), are unable to receive many of the basic services they need to stay healthy. While the size and demographic composition of this group is unclear – three case managers at Metropolitan Family Services independently estimated that 90 percent of their clients are socially isolated, and a recent study found that 48 percent of the city's elderly have no one available to help them<sup>16</sup> – it is signifi-

cant enough to constitute a major problem in the life of the city. [...]

The silent deaths of Chicagoans living alone and out of touch with members of their communities signal the dire reality of an emerging, emergency social condition – social life constrained by infirmity or fear and reduced to the boundaries of a tiny apartment – whose features and consequences have received scant attention from scholars and policy-makers.

During the heat wave, researchers from the Division of Epidemiological Studies at the Illinois Department of Public Health report, the high correlation between community area heat-related death rates and community area homicide rates indicated both the depth and the dangerousness of fear itself. High levels of violent crime in concentrated areas, the researchers explain, "can create fears influencing people's desire to open windows, leave home, or stay away from home for extended periods. Even during a heat wave, these fears may cause additional reluctance to go to cooling centers or to open windows."<sup>17</sup>

This problem can be particularly onerous for seniors living in senior public housing units, where changes in city housing policy have forced many to give up not only the public parks and streets that once framed their communal lives but the public spaces within their own apartment buildings as well. [...] A client of a social worker I shadowed has wired his door-knob to an electrical current so that it shocks everyone who touches it unless he disconnects the wiring. By 1996 the CHA had acknowledged the problem its housing policy has created, and it has pledged to remove people with substance abuse problems from the senior buildings within the next few years. Until then, however, insecurity will rule the lives of many seniors living in public housing.

### Down and Out in Uptown: An Urban Inferno on SRO "Death Row"

The single-room-occupancy dwellings (SROs) that house thousands of Chicagoans on the edge of homelessness represent the last option of insulation from the dangers of life on the streets but impose their own set of threats to the security of residents. SROs vary greatly in quality and form: several hundred units are funded with federal housing grants, well kept, staffed by trained social

workers and busy with programs for job training, substance abuse treatment, and habilitation to working life. But most for-profit buildings lack these services entirely and function instead as little more than low-grade shelters for the marginal or mentally ill. [...]

By the 1970s, SROs had become homes for some of the most precarious of the elderly and poor, but demand for them remained high because of the lack of other housing options. [...] These SROs, as the clerk in one of Uptown's most dilapidated hotels told me, serve as places "where people come to maintain their addictions, live alone, and die." This was never more true than during the heat wave, when the architectural and social conditions in the SROs made them the most dangerous places in the city, more dangerous, even, than the streets.

In the large Wilson Club Hotel it seems a miracle that only a few residents died in the heat. Managers there have used thin wood to subdivide the former industrial building into hundreds of units large enough to fit only a bed, a dresser, and a chair. The wood divisions stop several feet below the high, concrete ceilings, but residents and their property are protected by a keylock door and chicken wire pleated atop the wooden walls to serve as ceilings where none other exists. There are a few windows on the exterior walls and fire escapes on every floor, but these offer little ventilation to the residents lodged in the belly of the building; and there is no air conditioning in the dim public space on the ground floor, which was always empty when I visited.<sup>18</sup> [...]

#### Naturalizing Disaster: The Politics of Representing Death

[...] Journalistic and political representations of the heat wave deemphasized the social and political determinants of the disaster. Local political officials had obvious incentives to portray the heat wave as either a non-event or as a natural, and therefore uncontrollable, disaster, one that no one could have anticipated or done anything to prevent. [...]

The local media initially considered the heat wave to be a trivial story and covered it with light features such as one about the difficulty of finding air conditioners, but when the mortality levels began to rise the press shifted its coverage to the story of the deaths.<sup>19</sup> Yet the immediate visi-

bility of the crisis did not prevent Mayor Daley from attempting to conceal or deflect attention away from the city's morbid condition. Daley, holder of the mayorship his father had made the throne of machine politics, had won his seat in 1989 on the grounds that, "We can't close our eyes to [Chicago's] problems any longer. Being accountable starts in City Hall. Because the responsibility for managing the city lies with the mayor... I won't wait until disaster strikes."<sup>20</sup> But under the heat he changed his message. Refusing to acknowledge that the city had failed to protect the health of its citizens. Daley, who had neglected to issue a Heat Emergency Warning and to activate several possible emergency procedures during the city's deadliest week, groped wildly for alternative explanations or scapegoats he could blame for causing the crisis.

Confronted with early reports of the soaring death rates, Daley's initial response coupled denial with naturalization. "Every day," he lectured the press, "people die of natural causes. You can't put everything as heat-related... Then everybody in the summer that dies will die of the heat."<sup>21</sup> His skepticism was a challenge not only to the empirical connection between the weather and the overload at the morgue and in the hospitals, but also to the medical and scientific credibility of Dr. Edmund Donoghue, whose tenure as the county's chief medical examiner long outdates that of the mayor and whose professional reputation is outstanding. Public denial thus proved an untenable, even embarrassing, official position for the city - especially when the body count mounted and Dr. Donoghue, told of Daley's criticisms, defended his claim to the media and received the support of his colleagues in the field. "The mayor is entitled to raise questions," the medical examiner explained diplomatically, but "If anything, we're underestimating the number of heat-related deaths."<sup>22</sup> [...]

Invoking the bi-partisan logic of personal responsibility now ubiquitous within the American political field, Daley and his administrators blamed the victims of the heat waves themselves, as well as their families and friends, for failing to take care of themselves and each other. [...] The heat wave deaths, in other words, were caused by behavioral deficiencies rather than structural conditions or political failures. "We're talking about people who die because they neglect themselves," argued Daniel Alvarez, the city Commissioner of

Human Services. "We publicized common sense ideas, what the mayor was saying, drink plenty of water. These are people who don't read the newspapers, who don't watch television"; and Daley cautioned that "we need to be sure seniors do not become victims of their own independence."<sup>23</sup> [...]

During the heat wave, the frame of the "natural disaster" provided the city government with a perfect vehicle for defining the event in an explicitly nonpolitical and commonsensical vocabulary with which its constituency and other observers would be comfortable and familiar. [...] The naturalizing frame, however, only partly explains why Mayor Daley's political reputation survived the crisis so well. Given Mayor Bilandic's political demise in the aftermath of the blizzard, the question – which should be accompanied by the reminder that disaster management was not the only issue in Bilandic's mayorship<sup>24</sup> – remains: how is it that a natural disaster that kills hundreds of residents is less politically damaging than a disaster whose most significant effect was to block roads, stall public transportation, close schools and businesses, and restrict movement in the city? The answer is, in part, that the blizzard was much more damaging to Chicagoans with political clout than the heat wave, which, while killing hundreds, had almost no impact on elites and did relatively little harm to businesses.<sup>25</sup> [...]

The heat wave is now becoming a central part of Chicago folklore,<sup>26</sup> but much of the popular discourse on the event lacks the insights into the structure of the city that the disaster might have exposed. If the heat wave's mythical obituary conceals the very processes that produced its effects, though, the story of its largest funeral speaks its deepest truth. For far from being "the great equalizer," the deaths of the Chicagoans for whom no one cared only reinforced and made permanent the degradation of their lives.<sup>27</sup> At the end of August 1995, over a month after the week of death had passed, the bodies of 41 heat wave victims remained unclaimed at the morgue, leaving the city to care for them. On August 25, Chicago buried these neglected corpses, along with 27 other unclaimed bodies in the city, in a row of plywood boxes marked only by medical case numbers and yellow paper tags tacked onto the side. A Catholic priest who helped officiate the funeral – which was so brief that two of the ministers invited to participate arrived minutes late and

missed it entirely – found the discordance of the gruesome event in a city brimming with pride and anticipating renewed international praise too much to bear. "You always hear about mass burials around the world, in war and disaster," he lamented. "And this was home. This was Chicago." Yet there was no one, save a few reporters and a smattering of curious bystanders, to witness the city dispose of the remains, and now they have settled into the earth without stirring up much attention at all. The large grave, which is over 160 feet long, has no tombstone, no sign, nothing to show that the bodies buried therein testify to the expendability of life on the margins of a major American metropolis at the close of the millennium. For the city, the presence of the mass, anonymous grave matters little: almost no one is interested in a reminder of what is otherwise so easy to forget.

#### NOTES

- 1 US Centers for Disease Control and Prevention. "Heat-Related Illnesses and Deaths – United States, 1994–1995," *Morbidity and Mortality Weekly Report* 44/25 (1995): 465–8.
- 2 The heat index measures both temperature and humidity, which together determine how a typical person experiences the heat. It is analogous to the wind-chill factor, which measures experienced cold during the winter. Scientists have long associated high temperatures in cities with the urban "heat island" phenomenon, but only recently have some environmental scientists found that much of the modern warming of the earth takes place at night.
- 3 Excess death rates measure the number of deaths for a given period of time in relation to the baseline death rate. The Chicago Department of Public Health reported 739 excess deaths during the week of the heat wave, 696 excess deaths for the month of July. Note furthermore that Chicago's mortality rates did not dip in the months following the heat wave; the heat, then, did not (as some initially conjectured) simply kill people who would have died soon thereafter anyway. According to Whitman and his colleagues, heat-related death rates measure the absolute number of cases in which examiners attributed mortality to one of these criteria: "1) a measured body temperature of > 105 °F (> 40.6 °C) before or immediately after death; 2) evidence of high environmental temperature at the scene of death, usually greater than 100 °F; or 3) the body was decomposed and investigation disclosed that the person was last seen alive during the heat wave and that the



- environmental temperature at the time would have been high." Steven Whitman et al., "Mortality in Chicago Attributed to the July 1995 Heat Wave," *American Journal of Public Health* 87/9 (Sept. 1997): 1515-18.
- 4 Here I use "logic" to refer to the structure and course of the disaster as well as to the social order of the city, since it is the latter that largely determined the former.
  - 5 Among the major statements in this discussion are Peter Marcuse, "What's So New About Divided Cities?" *International Journal of Urban and Regional Research* 17/3 (1993): 355-65; Peter Marcuse, "The Enclave, the Citadel, and the Ghetto: What Has Changed in the Post-Fordist U.S. City," *Urban Affairs Review* 33/2 (1997): 228-64; Loïc J. D. Wacquant, "The Rise of Advanced Marginality: Notes on its Nature and Implications," *Acta Sociologica* 39 (1996): 121-39; Douglas Massey, "The Age of Extremes: Concentrated Affluence and Poverty in the Twenty-First Century," *Demography* 33/4 (1996): 395-412; and Manuel Castells, *End of Millennium* (Oxford: Blackwell, 1998).
  - 6 There are several reasons to think that these conditions are not unique to Chicago, and in fact the heat wave provided some of them. Milwaukee, about 100 miles away, experienced 91 heat-related deaths during the week. As in Chicago, this mortality level cannot be explained by the heat alone.
  - 7 Pierre Bourdieu and Loïc J. D. Wacquant, *An Invitation to Reflexive Sociology* (Chicago: University of Chicago Press, 1993), 112.
  - 8 For his most recent analysis of the hidden effects of the state, see Pierre Bourdieu, *The State Nobility* (Palo Alto: Stanford University Press, 1996).
  - 9 *The Chicago Tribune*, July 17, 1995, p. (2)5.
  - 10 See Arnold Hirsch, *Making the Second Ghetto* (Cambridge: Cambridge University Press, 1983).
  - 11 See Steven Whitman, "Mortality and the Mid-July Heat Wave in Chicago," presentation to the Chicago Board of Health (Sep. 20, 1995); and Whitman et al., "Mortality in Chicago Attributed to the July 1995 Heat Wave."
  - 12 See Charles Perrow and Mario Guillén, *The AIDS Disaster* (New Haven: Yale University Press, 1990), for a discussion of the ways in which the least politically powerful people with AIDS, poor people of color who were intravenous drug users, were neglected by the organizations who managed the AIDS crisis. Perrow and Guillén affirm a central claim of urban regime scholars, that lack of resources makes poor and minority communities least able to mobilize the government to support their needs, thus triggering a vicious cycle in which they are deprived further and made even more politically expendable. For statements of this position from urban regime theorists, see, among others, Clarence Stone. *Regime Politics: Governing Atlanta, 1946-1988*, (Lawrence: University of Kansas Press, 1989); and Steven Elkin, *City and Regime in the American Republic* (Chicago: University of Chicago Press, 1987).
  - 13 City of Chicago, *Mayor's Commission on Extreme Weather Conditions*.
  - 14 Robin Hambleton, "Future Directions for Urban Government in Britain and America," *Journal of Urban Affairs* 12/1 (1990): 75-94.
  - 15 City of Chicago, *Mayor's Commission on Extreme Weather Conditions*, 4.
  - 16 Interviews with social workers. Metropolitan Family Services, June 1996; and M. Fleming-Moran et al., *Illinois State Needs Assessment Survey of Elders Aged 55 and Over* (Bloomington: Heartland Center on Aging. Disability and Long Term Care, School of Public and Environmental Affairs, Indiana University, 1991).
  - 17 Tiefu Shen et al., "Executive Summary: Community Characteristics Correlated with Heat Related Mortality, Chicago, Illinois, July 1995," unpublished MS.
  - 18 The conditions in the worst SROs resemble the "cattle-sheds for human beings" described by Frederick Engels. Engels's remark that "such a district exists in the heart of the second city of England, the first manufacturing city of the world," has an ironic resonance for the case of Chicago, America's own "second city" and historical manufacturing center. See Frederick Engels, *The Condition of the Working Class in England* (Chicago: Academy Chicago Publishers, 1984).
  - 19 Interviews with Chicago journalists.
  - 20 *Chicago Sun Times*, July 25, 1995: 25.
  - 21 *Chicago Tribune*, July 25, 1995: (7) 1.
  - 22 *Chicago Tribune*, July 20, 1995: 1; and *Los Angeles Times*, July 23, 1995: A1.
  - 23 Perhaps the most familiar case in which the political economy and structural morphology of vulnerability determined disaster mortality is the Titanic accident. First-class passengers, whose wealth allowed them to obtain positions at the higher (and in this case safer) levels of the ship and gave them priority in the rescue, survived at a much higher rate than passengers seated in lower-class positions. Passengers with the lowest class tickets suffered the highest mortality rates. Yet wealth does not always protect against disaster damage. Note, for example, that earthquakes in modern cities might be most disastrous for wealthy home-owners who accept the risk of building expensive homes on mountain cliffs, or that forest fires might affect only residents wealthy enough to build homes in expensive, greener areas, such as the Oakland and Berkeley hills. In these crises, however, the order of assistance, organization, and reconstruction is often determined by the

- wealth and political power of the communities affected: more elite areas are rebuilt and repaired much more quickly than disadvantaged areas. See William Cronon. "Introduction: In Search of Nature," *Uncommon Ground: Toward Reinventing Nature* (New York: W. W. Norton, 1995).
- 24 For a thorough discussion of Bilandic's electoral loss to Jane Byrne, see Paul Kleppner, *Chicago Divided: The Making of a Black Mayor* (DeKalb: Northern Illinois University Press, 1985), ch. 5.
- 25 Some stores and businesses that lost their electricity, particularly those that stocked frozen perishables, and local agriculture were more damaged by the heat wave. Nonetheless, the overall effect of the heat wave on business was less severe than the blizzard.
- 26 "Now and for the rest of our lives," says one member of Chicago's severe-weather commission, "we'll be telling our grandchildren about the summer of 1995. People will be talking about this forever."
- 27 For an analysis of the social and symbolic significance of funeral rituals and burial conditions, see Nancy Scheper-Hughes, *Death Without Weeping* (Berkeley: University of California Press, 1992; and Chapter 33).