

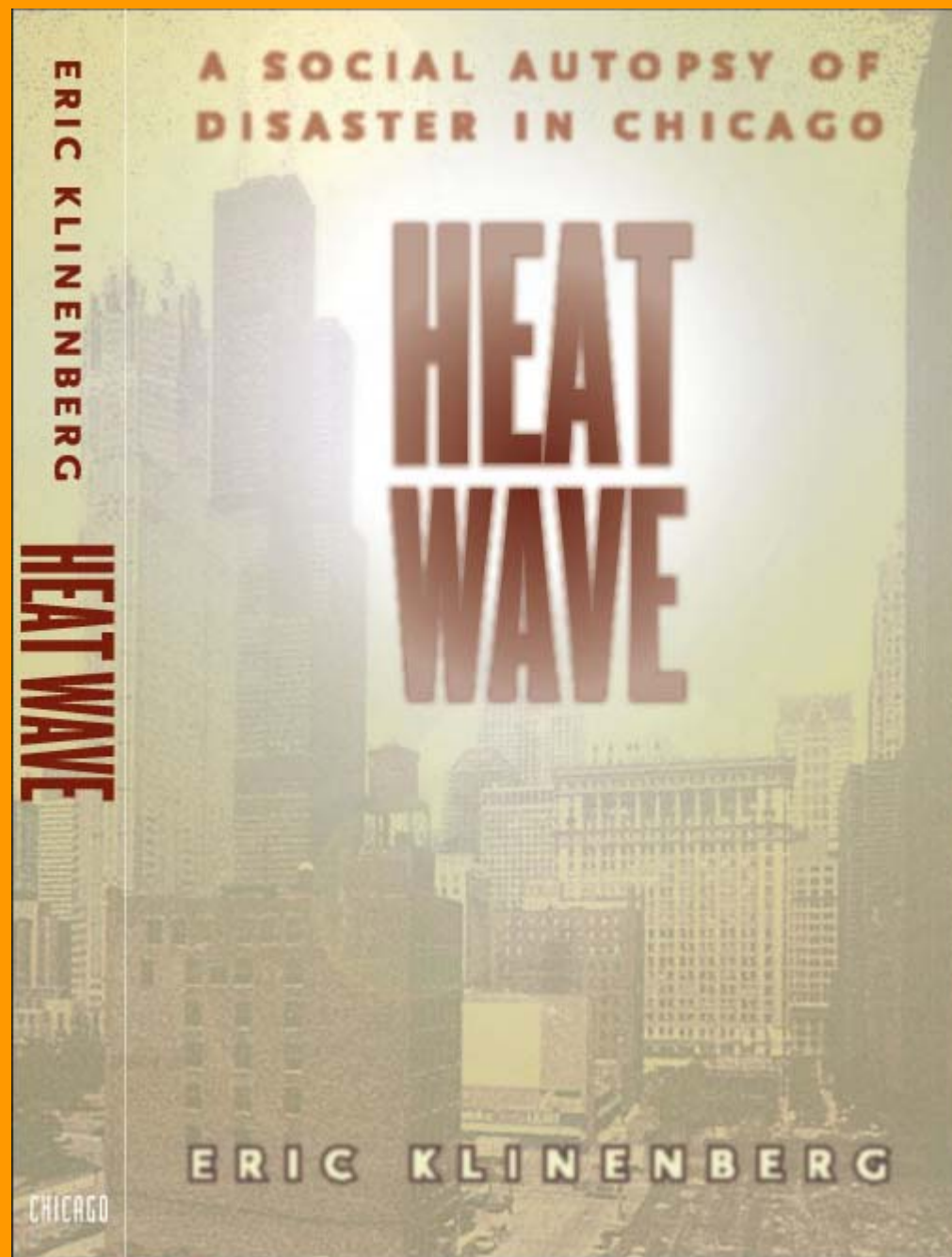
Why Heat Waves are so Deadly, and How California Can Prevent Future Disasters

Eric Klinenberg

Associate Professor of Sociology

New York University

ek52@nyu.edu



*Heat Wave: A
Social Autopsy
of Disaster in
Chicago*

Most research
conducted at
UC Berkeley,
Department of
Sociology

America's Deadliest Environmental Disaster

- In typical years, heat waves kill more Americans than all the other “natural disasters” – earthquakes, hurricanes, tornadoes, and floods – combined.

Average annual heat mortality in U.S.

- Heat-Related Deaths: 400
- Excess Deaths from Heat: 1,500
- All other natural disasters: 200

Measuring Heat Wave Fatalities

Heat-Related and Excess Deaths

- Excess Death: Mortality Total Above the Normal Number for Specified Period of Time.
- Heat-Related Death: Need Individual Examination, and Often There Isn't One

Medical Examiner's Criteria for Heat-Related Death

No history of trauma or evidence of fatal injury and at least one of the following:

1. Measured body temp of $\geq 105^{\circ}\text{F}$ ($\geq 40.67^{\circ}\text{C}$)
2. High environmental temp at death scene
3. Decomposed body, person seen alive in heat wave when temp would have been high

Silent and Invisible Killer...

- Heat Waves Get Little Attention from Media and Policy Makers
 - Compared to other disasters, heat waves don't generate good visual spectacles
 - Heat waves do not cause property damage, and do not attract interest of insurance companies, developers, or opinion makers
 - For middle class and wealthy, avoiding danger is as simple as turning on the AC
 - Often there is widespread denial and disbelief

...Of Socially Invisible People

- Heat Wave victims are primarily:
 - Elderly
 - Poor
 - Socially Isolated
 - Infirm
 - California: *Farm workers* and day laborers are also at risk
 - Every year, reports of heat-related illnesses and fatalities from agricultural regions
 - Need special protection

More on the Way?

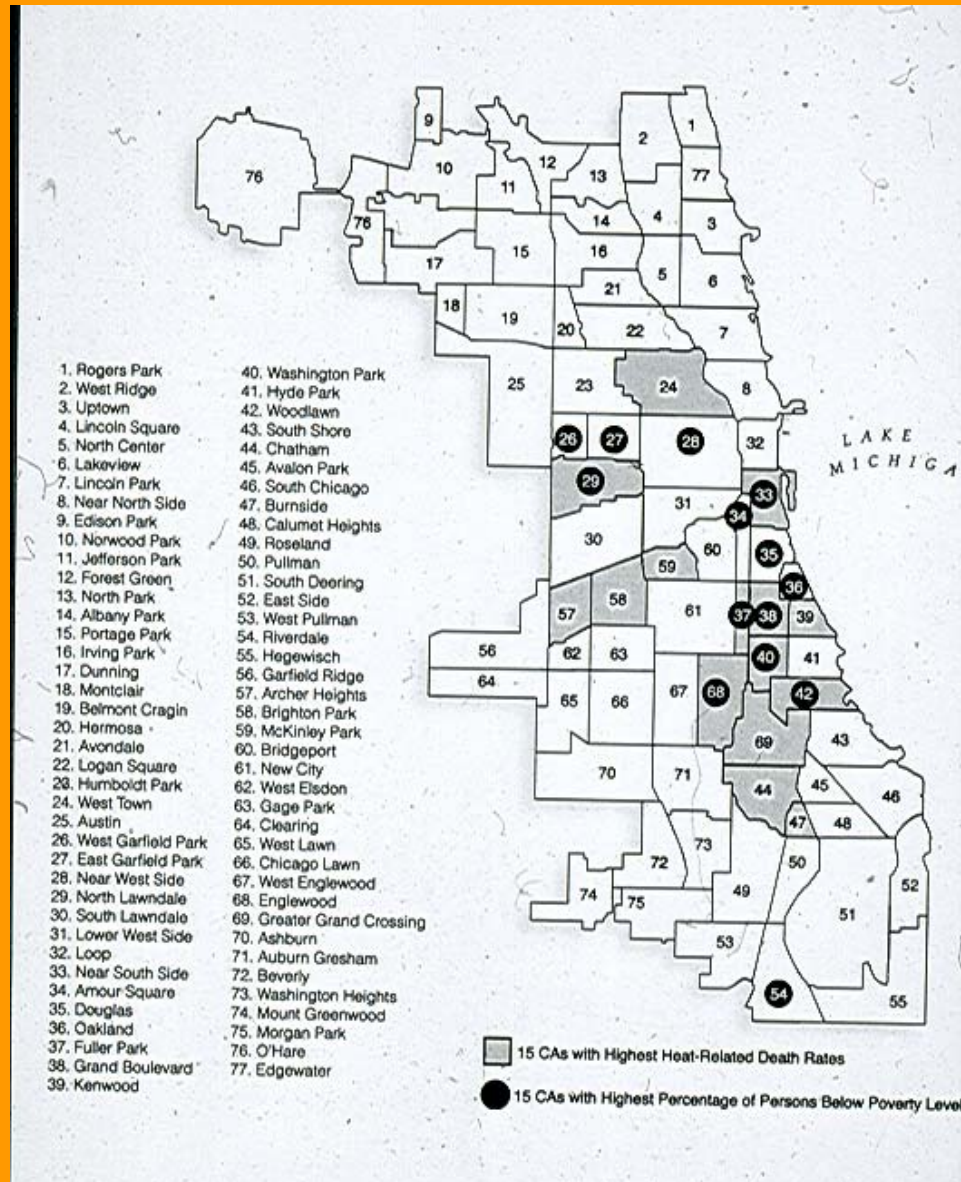
National Climatic Data Center :

- The seven hottest years on record all have occurred since 1997, and the ten hottest since 1990
- In addition to high day-time temperatures, high evening temperatures – “high lows” – trap people
- Urbanization – Rise of heat islands, which attract and trap heat
- Urban areas have concentrations of impoverished, elderly, vulnerable populations

It's Not Just the Weather...

- Today there are more Americans living alone (27 million), aging alone (10 million), and also dying alone than ever before
- For many Americans, especially those on a fixed income, costs of air conditioning – both the units and the energy bills for running them – are prohibitively expensive
- Yet energy use is rising, and blackouts are common during heat waves
- Fear of crime leads some elderly to close or seal windows, if not stay at home
- In cities, poor neighborhoods are most at risk

Social Geography of Vulnerability



Formula for Disaster

- Extreme weather
- Aging Society
- Social Isolation
- Inequality
- High Energy Use and Costs
- Insufficient Health Care and Support Services for the Elderly and Poor

Why Don't We Know More?

- Heat Waves are easy to ignore, and also easy to forget.
- No organized or influential interest group lobbies for disaster policies to protect the elderly, poor, and isolated, so heat waves are not included in most federal, state, and local disaster policies.
- Stories disappear from news as soon as the weather changes...

A Dozen Ways Governments Can Prevent Heat Disasters and Reduce Harm

- * 1) Issue a heat emergency alert before dangerous weather hits. Work with local media to educate public. Provide information about who is at risk and how they can be protected before disaster strikes.
- 2) Exposure to air conditioning, immersion in water, and hydration are all it takes to save lives. But often a helping hand is necessary, and hundreds of thousands of isolated elderly, mentally ill, and poor people lack support.
- 3) Work with local media to call for citizens and community groups to check up on the vulnerable – but this is not sufficient. Must reach out.

Keeping Cool

- 4) Require SROs, nursing homes, and public housing to make air conditioning available.
- 5) Opening cooling centers can be effective. Provide transportation to ensure that the most vulnerable residents can get to cooling centers.
- 6) Low Income Home Energy Assistance Program (LIHEAP) – ensure it's available for summer.
- 7) Farm workers: Air conditioning, shaded areas, special breaks, ample supply of water, and reduced hours in highest heat.

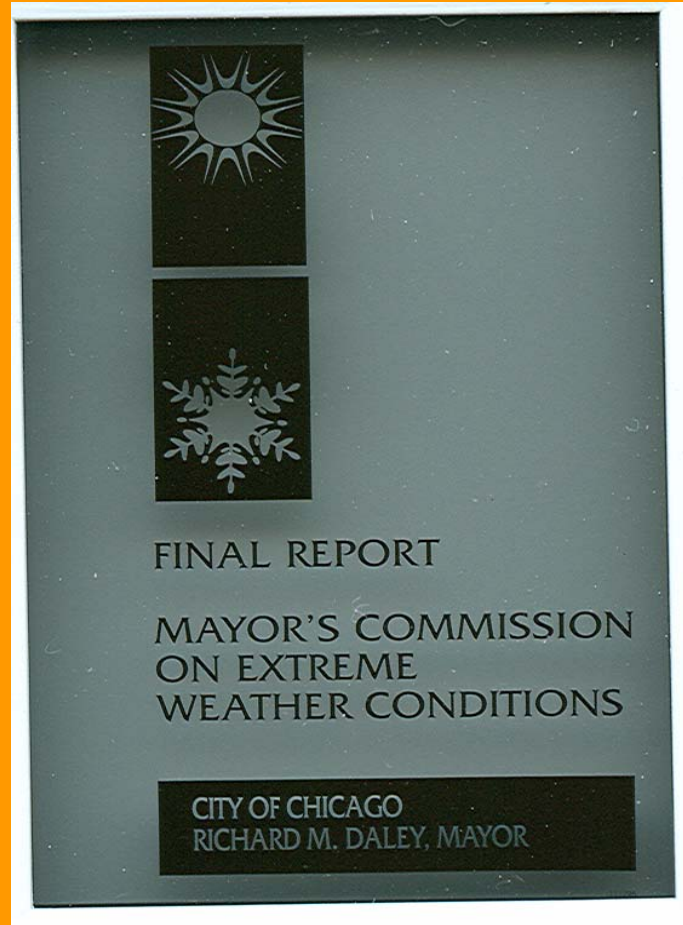
TARGET VULNERABLE PEOPLE AND PLACES

- 8) Produce lists or registries with names, phone numbers, and addresses of vulnerable residents: elderly, seniors living alone, people being treated for mental illnesses, single room occupancy hotels.
- 9) Set up call centers and reach out to these populations during heat crises.
- 10) Use local agencies – community police, department on aging, emergency services – to do home visits with vulnerable during severe heat waves.

Leadership and Preparedness

- 11) Monitor intake at hospital emergency rooms. If there is a spike in heat-related illnesses, put all city agencies on alert.
- 12) Coordinate response across local departments – avoid Chicago 1995. Mayors must command extra resources from city agencies when necessary.

When Disaster Does Strike, Learn from Mistakes – Don't Go on Vacation and Hide Problems



Will California take the lead?

How many more preventable deaths will it
take for governments to treat heat waves
as serious health hazards?

Is today the beginning of a change?