

# *Social Infrastructure*

## *THE SURPRISING, MISSING INGREDIENT IN URBAN RESILIENCE*

*by Eric Klinenberg*

**E**ric Klinenberg makes a convincing case for social infrastructure – the invisible glue of relationships, networks and cooperation that bonds and sustains communities – as a potent factor in enhancing the resilience of cities when disasters strike. Professor Klinenberg is Professor of Sociology and Director of the Institute for Public Knowledge at the New York University. A new edition of his classic book, *Heat Wave: A Social Autopsy of Disaster in Chicago*, will be published in Spring 2015.

Chicago experienced an unusually severe summer in 1995. For nearly a week, thermostats registered tropical highs of 41°C. Infrastructure was not spared. Roads buckled, bridges locked and train rails melted in the heat. The power grid failed, and water pressure fell after residents in poor neighbourhoods opened fire hydrants to cool down. Half the city's hospitals closed their emergency rooms to new patients due to insufficient capacity. In typical years, heat waves kill more

Americans than all other natural disasters combined, but Chicago was unprepared for this calamity. The result was one of the most devastating – but least remembered – urban disasters in U.S. history.

From 14 July to 20 July, 739 Chicago residents in excess of the norm died, and thousands more suffered debilitating heat-related illnesses. The heat wave damaged relatively little property

and killed mainly poor, old, and isolated residents. As a consequence, it received far less public attention compared to more recent and visually spectacular catastrophes, such as Hurricane Katrina and Super-storm Sandy. But with global warming, urban areas across the planet will experience longer, more frequent and more intense heat waves. There is an urgent need to learn how and why cities break down during heat crises, and why some people and places prove surprisingly resilient.

Climate scientists and epidemiologists have developed excellent models for predicting how many people will die during extreme hot weather events. In this case, however, their models dramatically underestimated the death toll. The researchers acknowledged that weather could not fully explain what had happened. I initiated a “social autopsy” to see if I could.

I mapped the heat mortality by neighbourhood and looked for patterns of vulnerability. The initial results seemed predictable: The high mortality areas were predominantly poor and overwhelmingly African American, the places that suffer disproportionately from all kinds of urban problems, from violence to joblessness, asthma to infant mortality. As a matter of social justice, the pattern was infuriating. But as a matter of social science, it was little more than a confirmation of most people’s expectations.

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Except that, upon closer inspection, it wasn't. When I looked closely at the places that proved most resilient, something completely surprising emerged. On paper, three of the ten neighbourhoods with the lowest heat mortality rates looked like they should have wound up in the high mortality group. They were extremely poor, completely segregated African-American areas. Some were next to the areas that had suffered most. Yet they all had mortality rates that were lower than many of Chicago's most affluent and stable neighbourhoods. This posed an urgent scientific question: what made these neighbourhoods so much more resilient than expected?

No quantitative data could answer this question, so I began a period of ethnographic observation in places with similar demographic profiles but dramatically divergent mortality outcomes during the heat wave. I discovered that the crucial difference had nothing to do with race, ethnicity, culture, poverty rates or household composition, nor was it related to the performance of "hard" infrastructure such as electricity, water and transportation. What mattered was the social infrastructure: the sidewalks, streets, stores, parks, public facilities and community organisations that, when robust, promote contact and enhance social support among friends and neighbours, or, when decrepit, leave residents isolated and estranged.

Consider Englewood and Auburn Gresham, two adjacent Chicago neighbourhoods. Both are very poor and nearly 100 per cent African-American, but the similarities end there.

For most of the past 50 years, Englewood has been stuck in a downward spiral of abandonment and decay. Its major employers are gone, and today the population is less than half compared to 1960. The housing stock, much of it burned from arson during the tumultuous 1960s and 1970s, has been depleted. The banks, grocery stores, restaurants, and local shops that once drew residents – particularly older and more vulnerable people – out of their homes and into neighbourhood life, have also dwindled. The sidewalks and curbs are crumbling. Empty lots are ubiquitous. Local conditions encourage people to hunker down in their houses even, perhaps especially, when disasters hit and social support can make the difference between life and death.

Auburn Gresham has a strikingly different social infrastructure. It similarly experienced a sharp drop in local employers over the past 50 years, but residents have remained in the neighbourhood, the housing stock is still intact, and it has had almost no population loss. Instead, Auburn Gresham has a rich supply of apartment buildings and single-family houses, connected by well-maintained sidewalks and streets. Instead of shuttered stores, it has diners, groceries, and shops. Local churches and community organisations do extensive outreach on a regular basis, and step up their efforts when a heat wave strikes.

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During the 1995 heat wave, residents and community groups in Auburn Gresham knew who was likely to be home, alone, and imperiled, and who was available to help. They also benefited from the neighbourhood’s social infrastructure, which – in striking contrast to Englewood – encouraged even the most vulnerable to seek companionship outside.

How much did these differences matter? During the heat wave, the death rate in Englewood was 11 times higher than the death rate in Auburn Gresham. But the value of social infrastructure shows up in another statistic, one that matters in all seasons: life expectancy in Auburn Gresham is five years longer than in Englewood.

Since publishing my research, I’ve participated in countless policy debates about how to protect cities from dangerous weather. I always insist that investing in the social infrastructure of vulnerable urban areas is essential for promoting resilience, both daily and during disasters. Nearly everyone agrees with this, but almost all the public resources we spend on climate security go to large engineering projects for hard infrastructure instead.

I see the value in these projects, but I also know that there’s no such thing as an invulnerable infrastructure system. No matter how much we invest in technology, when a catastrophe strikes, there is a chance that power grids and communications systems will fail, transit networks will be crippled, fuel supplies will be exhausted, food won’t get delivered and water taps will run dry. When that happens, social infrastructure becomes our main lifeline. We ignore it at our peril.

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