

1 Flint First: The Injustice of the Flint Water Crisis

In a ballroom at the University of Michigan-Flint, a short walk away from the Flint River, Dr. Mona Hanna-Attisha sat facing a panel of state legislators. It was March 29, 2016, six months after her announcement that lead leaching from water pipes was finding its way into the bloodstreams of Flint's children.¹ State officials had disputed the claim at first, calling Hanna-Attisha's research "unfortunate" and suggesting that it was politically motivated.² Within a matter of days, however, their resistance broke as the state's own epidemiologists replicated her findings. From that point forward, the contamination of Flint's water would forever be known to the world as the "Flint water crisis."

It had taken Hanna-Attisha two weeks of intensive research to deliver what was received as smoking-gun evidence of a public health emergency in Flint. But her intervention—as she acknowledged during the September 2015 press conference at which she released her findings—had been a long time coming. Many in the medical community had been slow to accept that the water in Flint posed a threat to human health. By contrast, she pointed out, Flint's "grassroots organizers" had been fighting to keep the city's water problems "in the public view" for months.³ These activists were the first to describe the situation as a "crisis" and the first to argue that system-wide contamination was causing demonstrable harm to residents—and they had been amassing the evidence since 2014. Again and again, they were ignored, dismissed, and derided by politicians, administrators, and so-called experts. In confirming the activists' longstanding claim that Flint's water was unsafe, Hanna-Attisha's data led directly to the realization of their demand that the city disconnect from the Flint River. Now, as she testified before one of the three state bodies tasked with investigating the crisis, many of those activists sat attentively in the audience behind her.

Hanna-Attisha noted that during the year and a half that Flint drew its drinking water from the river, the number of children age zero to five testing positive for elevated blood lead levels rose from 2.1 percent to 4 percent. But she cautioned the committee against concluding that this figure captured the full extent of the damage done. In fact, it was almost certainly a significant underestimate. Because lead leaves the blood and enters the bones within a month's time, blood tests were of limited value in capturing past exposure. A "normal" result (2 $\mu\text{g}/\text{dL}$ or below), then, could not be taken as a sign that no harm had occurred. Everyone in Flint had to be "assumed as being potentially exposed," irrespective of what tests showed about their blood lead levels.⁴ Furthermore, Hanna-Attisha explained, her analysis depended on data derived from routine, Medicaid-mandated lead screening at the ages of one and two years. But lead in water poses a special danger to infants reliant upon formula, who are unlikely to be tested during their period of highest exposure.

Hanna-Attisha also stressed that even low levels of lead exposure can cause harm. Warning that there is "no safe level of lead," she pointed in particular to lead's effects on cognition and behavior. Lead exposure in childhood, she said, is known to result in lower IQs, attention deficits, hyperactivity, and impulse control disorders. Infants in Flint who consumed tainted water through formula were at the most "developmentally vulnerable" age, and because lead "crosses in utero," they may have been exposed before even being born. Furthermore, the epigenetic effects of lead exposure can alter DNA in ways that make impairments inheritable across two generations, meaning that the community would see "decades-long consequences" from the exposure.

It would never be possible to say with certainty that any one deficit in any one child was directly caused by lead. But because lead exposure in Flint was population wide, the working assumption had to be that all Flint children needed, and deserved, the maximum possible attention and care: as Hanna-Attisha put it, "There is no way to predict which child is going to have which problem and that is why we need to do everything for all children." Wraparound support—nutritious food, health care, education—she argued, should be made available not just to the six thousand-plus Flint children under the age of six but to *every* Flint child. In addition, because lead is harmful to people of all ages, the same support should be extended to every Flint adult, and to anyone who regularly spent time in Flint during the years of 2014 and 2015. In total, upward of 150,000 people, by her estimation, were entitled to all "the necessary interventions to mitigate the

impact of this disaster”—in addition, of course, to the replacement of lead infrastructure to prevent further exposure.

No doubt aware of the high esteem in which Hanna-Attisha was held by those in the room, the committee treated her with respect and, for the most part, deference. During the question-and-answer session, however, State Representative Ed Canfield, a Republican from Michigan's 84th District and a physician himself, pushed back against her assessment of the extent of the harm done to Flint children. With the insistence that he was attempting not to “diminish” the crisis but rather to give worried parents “a better understanding” of its severity, Canfield sought to introduce some historical perspective. He pointed out that as recently as 1998, over 44 percent of Michigan children had blood lead levels above the cutoff now used to diagnose lead poisoning (5 µg/dL). In 2015, Flint's second year on the river, which encompassed both the peak of the lead contamination and a surge in voluntary blood lead tests, 3.3 percent of the city's children had been confirmed to have elevated blood lead levels.

Furthermore, Canfield continued, even in the present this figure could be compared favorably against rates of lead poisoning in many other parts of Michigan. Citing 2012 data, he pointed to Branch County, where 10.1 percent of children had elevated blood lead levels, to Jackson County, where the number was 8 percent, to Kent County, where it was 6.2 percent, and to Huron County, where it was 5.4 percent. Even if one conceded Hanna-Attisha's point about the underdiagnosis of infant lead poisoning, Canfield implied, surely the harms caused by Flint's lead problem were not substantially worse than, or even as severe as, those found elsewhere. Why, then, should Flint be given special consideration? Invoking his responsibility as a state representative to consider the needs of all Michigan citizens, Canfield argued that “this is a statewide problem and we have to help everybody in the state.”

Canfield's argument was no mere academic exercise. The State of Michigan was being asked to provide Flint with an “unprecedented” amount of resources (in Governor Rick Snyder's estimation) to remediate the effects of the crisis.⁵ By March 2016, three supplemental appropriations bills had already been approved by the state legislature, amounting to \$67.4 million—money for reconnecting Flint to the Detroit water system, for bottled water and filter distribution, for health care and education, for lead service line replacement. Another \$126.7 million of state aid for Flint was under consideration.⁶ Looking even further ahead to the 2016–2017 fiscal year, tens of millions,

perhaps hundreds of millions, more would be needed for infrastructure and the wraparound care championed by Hanna-Attisha. If, as some residents demanded, *all* of the city's pipes were to be replaced, rather than just the lead service lines thought to be the main source of the lead problem, the bill could come to \$1.5 billion for infrastructure alone. Given the available data on lead exposure, were the residents of Flint, much less all of the 150,000 people invoked by Hanna-Attisha, really entitled to the "so much" that she was calling for? More so, anyway, than fellow Michiganders who had similar, if not more serious, needs of their own?⁷

As Canfield pursued this line of reasoning, the atmosphere in the room grew palpably tense. People shifted uncomfortably in their seats. The activists in attendance, never shy about speaking out when they disagreed with something, were unusually quiet. Finally, in the middle of Canfield's disquisition, Hanna-Attisha broke in impatiently. The difference in Flint's case, she asserted, was that Flint had been "*poisoned by policy*."⁸

With these words, the audience erupted in a cathartic, prolonged cheer. As a flustered Canfield continued to plead the case of other lead-plagued cities, activists shouted "*Flint! Flint first!*"

Hanna-Attisha's riposte to Canfield—that Flint had not just been poisoned, but poisoned by *policy*—offers an instructive articulation of the view of the water crisis I will elaborate in the first part of this book: what made the crisis distinctive, what made it especially egregious, was not just *how badly* residents were harmed, but *how* they were harmed. The enthusiastic response her words elicited from the crowd attests to the popularity of this interpretation of the crisis in Flint itself. In fact, the argument was not, really, Hanna-Attisha's at all, though she made a point of elevating it in her public appearances: it was the argument the activists had been making about the crisis all along.

This is not to say that Flint activists were prepared to concede Canfield's point about the quantity of harm inflicted by the water. Using the same logic as Hanna-Attisha, they argued that the damage caused by lead was far worse than what was reflected in official lead poisoning statistics. They also pointed to health symptoms that went beyond anything that could be chalked up to the effects of lead alone, suggesting the presence of other contaminants in the water that were wreaking havoc on residents' bodies. Adding up all of the various harms popularly attributed to the water led many in Flint to the conclusion that they were victims of an injustice of historic proportions.

But as the exchange between Hanna-Attisha and Canfield illustrates, the argument that Flint had suffered an unfair share of harm relative to other communities (i.e., suffered a *distributive* injustice) was not always enough. The problem was not only that some harms could be downplayed by putting them into historical or comparative perspective. There was also the larger problem of demonstrating that causal links between contamination and health ailments existed at all. Those unsympathetic to worst-case-scenario analyses could always argue that there was an essential difference between potential harms and confirmed ones, or that existing data were not robust or reliable enough to support the full gamut of claims made about the water's effects. What advocates for Flint needed was a way of talking about harm qualitatively as well as quantitatively, in terms of origins as well as outcomes. Framing the crisis as a product of policy brought attention not just to *what* happened but to *how* it happened, to the context in which critical decisions about Flint's water supply, water treatment, and water infrastructure were made, and, ultimately, to the question of democracy.

Dilemmas of Distributive Justice

The discovery of lead in water and blood turned the Flint water crisis into a national news story in the fall of 2015. Flint became the centerpiece of a reinvigorated national discussion about aging infrastructure and served as a wake-up call about the lingering presence of lead in the urban environment. According to an oft-used metaphor, Flint was the canary in the national coal mine, a foreboding of crises to come if water systems were not upgraded and regulatory standards tightened. Many Flint residents took pride in the role the city played in raising this kind of awareness and potentially preventing future crises. "Because of Flint," Pastor Alfred Harris of Saints of God Church told me, "municipalities all over the country and the world began to take a look at their water and their infrastructure." For Harris, it was a sign of the Apostle Paul's assurance that "all things work together for good."⁹

But along with this pride came the burgeoning realization that Flint's lead woes were far from unique. Although the percentage of lead-poisoned children in Flint was higher than the nationwide average (estimated by the Centers for Disease Control and Prevention [CDC] to be 2.5 percent), it was considerably lower than percentages found in thousands of other cities and neighborhoods across the country. As a flurry of articles began to appear comparing Flint to other municipalities, its blood lead levels became the

standard by which other cities measured the severity of their own lead problems. Reuters, which carried out the most extensive analysis, concluded not only that Flint was “no aberration” but that it “doesn’t even rank among the most dangerous lead hotspots in America.” Looking at blood test results in census tracts and zip codes in twenty-one states, Reuters found nearly three thousand areas with lead poisoning rates “at least double” those in Flint during the peak of the water crisis. More than eleven hundred of these had rates “at least four times higher.” In Flint’s most affected ward, Ward 5, the percentage of children age 0 to 5 with elevated blood lead levels got as high as 16 percent—one of the points made by Dr. Hanna-Attisha as a rejoinder to Rep. Canfield. But in some parts of the country—in forty-nine census tracts in Pennsylvania alone, for example—upward of 40 percent of children have similarly high levels.¹⁰

Some also compared Flint favorably to what was arguably its closest parallel in the recent history of water contamination events: the Washington, D.C., lead-in-water crisis of the early 2000s. In D.C., a well-intentioned change in the city’s water treatment process from chlorine disinfectant to chloramine turned out to have a corrosive effect on lead pipes, causing lead levels to spike starting around spring 2001. Virginia Tech professor Marc Edwards, whose intimate involvement in the D.C. crisis presaged his intervention in Flint, estimated that the resulting harms to human health were twenty to thirty times worse than those suffered by Flint residents. As the local water utility, the Environmental Protection Agency (EPA), and the CDC resisted acknowledging the problem and taking action, D.C. residents were, he said, exposed to “astronomical” levels of lead for 3.5 years.¹¹ Hundreds of young children between the ages of one and six were lead poisoned, and lead exposure may have contributed to as many as two thousand miscarriages and two hundred fetal deaths.¹²

Despite the severity of the D.C. crisis, the facts took much longer to come to light there than in Flint, a process stalled by obfuscation on the part of government agencies but also by debates over whether lead in water was much of a health threat at all.¹³ In the meantime, the harms were ambiguous enough that in April 2004, the *Washington Times* could deride the “ongoing hysteria” about lead in the water, calling it “much ado about nothing.”¹⁴ In Flint, similar sentiments denying outright the existence of a crisis were expressed, in a few notable instances, even after the basic facts about lead exposure were known. Conservative political analyst and part-time Flint

resident Bill Ballenger argued in January 2016 that the crisis was “nowhere near as bad” as the media was making it out to be, going so far as to question whether the whole thing wasn’t some kind of politically motivated “hoax.”¹⁵ Later that year, Michigan Department of Environmental Quality (MDEQ) Chief Deputy Director Jim Sygo remarked that the crisis had been “overplayed” and was “more created than anything else,” citing comparable lead problems as nearby as Grand Rapids and Kalamazoo. Like Ballenger, he suggested that there were “ulterior motives at play,” and accused Dr. Lawrence Reynolds, a well-known advocate for residents on the Governor’s Flint Water Task Force and Flint Water Interagency Coordinating Committee, of a calculated ploy to brand the situation an ongoing “crisis” so as to secure resources for the city.¹⁶

Ballenger and Sygo were roundly condemned for their comments,¹⁷ but they had spoken at least a partial truth: the people fighting for Flint *were* invested in creating and maintaining a sense of crisis around the water situation. The struggle for clean water began, after all, as a struggle to convince officials as well as the general public that a crisis existed at all.¹⁸ Early evidence of water quality problems brought forward by residents was dismissed as anecdotal, falsified, or irrelevant to considerations of public health. Confirmed problems at particular homes were brushed off as anomalies. Flint’s water activists knew that getting Flint off the river meant making the case that the water posed serious, pressing, and systemic threats to residents. They began speaking of a water “crisis” when the local media would only put the term in scare quotes, and many months before confirmation of system-wide lead contamination.¹⁹

The battle over terminology did not end there. After the existence of a “crisis” was generally acknowledged, a debate emerged over whether that descriptor would trigger the necessary state and federal assistance. During the mayoral race of 2015, incumbent Dayne Walling and challenger Karen Weaver, who had won the support of many activists as a fellow “water warrior,” clashed over whether the city should declare an “emergency” in the hopes of prompting similar declarations at the state and federal levels. Upon winning the election, Weaver fulfilled her campaign promise to make such a declaration, triggering the hoped-for chain reaction and prompting the deployment of the National Guard and \$5 million in emergency federal funds.

Activists were not satisfied with the “emergency” declaration, however. They had taken to describing the situation as a “disaster,” a term embodying

their demand that Flint be declared a federal disaster area, thereby opening up the possibility of more federal assistance. In this matter they were, atypically, on the same side as Governor Snyder, who petitioned the Obama administration for a disaster declaration in January 2016.²⁰ In Snyder's case, the request was almost certainly a matter of political optics, made in the knowledge that Stafford Act stipulations limit federal disaster aid to "natural" disasters. The activists, however, took the demand quite seriously, insisting that some sort of exception could be made,²¹ and over the next two years they persisted in using the term "disaster" as a means of keeping this demand alive.

The declaration, however, never came, and even the federal "emergency" expired in August 14, 2016. As officials, citing dropping lead levels, began to claim that Flint water was as safe as water anywhere else in the country, the debate over whether the city was in "crisis" at all resurfaced. Activists feared a declaration of mission accomplished would mean that Flint would fade from the national spotlight, that the State of Michigan would discontinue emergency water relief, that the damaged pipes would remain in the ground, and that residents with lingering concerns would find themselves marginalized all over again. What began as a struggle to create a sense of crisis evolved, then, into a struggle to ensure that the crisis was not pronounced over prematurely.

To suggest that there was strategy behind the semantic interventions made by activists is not to imply that they were made in bad faith. I found no evidence that the people insisting that Flint was experiencing a "crisis," "emergency," or "disaster" did not genuinely believe it to be true. Granted, their assessments did not always rest on a robust comparative perspective: some were content with the knowledge that Flint's problems were bad enough, in an absolute sense, to require immediate and decisive action, and viewed comparisons to other cities as a "distraction."²² But the idea that the harm done to Flint was unusually or even uniquely bad repeatedly cropped up as a justification for giving the city special priority in the distribution of state and federal resources. Some of the activists took to describing what was going on in Flint as "the largest public health disaster in the history of this country."²³

Claiming that Flint had it worse than other cities brought the water crisis under the umbrella of distributive justice.²⁴ Within an environmental justice framework, distributive justice refers to the distribution of benefit and harm that people derive from their environments, under the assumption that no one is inherently entitled to more benefit, or less harm, than

others. A distributive *injustice* exists either when one group benefits disproportionately from environmental goods or when there is “inequity in the distribution of environmental risks,” and/or confirmed harms.²⁵ Diagnosing a distributive injustice in this latter sense is dependent on being able to quantify in some measure the risks faced and harms incurred. This quantification is especially critical when it is used to determine the amount of resources needed to rectify an injustice.²⁶

Quantification of harm cannot take place in the abstract, for harms do not exist in a vacuum; they are visited upon flesh-and-blood people likely to be impacted in different ways, and to different degrees, by the same harm depending upon their circumstances. A child in good health, with a strong social support network and many opportunities, will be less impacted by lead poisoning than a child inhaling polluted air, attending an underfunded school, and focused on day-to-day survival rather than self-realization. A holistic view of the life chances of Flint children suggests that any lead-induced deficit they experience will, on average, be more consequential than a similar deficit in a city like Grand Rapids or Kalamazoo. Residents had an intuitive sense of this: I observed much distress over the thought that an entire generation of children already fighting the odds would be set back *further*, even if only by a notch.

Any application of the principle of distributive justice, then, must be cognizant of the relativity of harm, factoring in the context in which harms occur, the characteristics of the people to whom they occur, and the cumulative impact of multiple harms. But, of course, one must also show that the harms exist in the first place. The difficulty posed by environmental contamination is that concrete linkages between exposure and public health outcomes can be hard to trace.²⁷ Often it is difficult to establish even a simple correlation between increases in exposure to contaminants and increases in symptoms, due to a lack of the data necessary to make firm before-and-after comparisons. Hard evidence of causal relationships can be even more elusive. The resulting ambiguity sets the stage for disputes among experts about the extent of the harm, as well as conflicts between experts and laypeople. When quantifiable scientific evidence of harm is underwhelming, it often clashes with the public’s sense that much greater harms *must* have occurred.

Sometimes uncertainty can actually be a boon to those who wish to argue that an environmental crisis is worse than officially acknowledged. As detailed earlier, uncertainty around lead exposure was the basis of Mona

Hanna-Attisha's exhortation to err on the side of caution by offering maximal assistance to everyone conceivably exposed. It also allowed residents to attribute a wide array of health and behavioral problems to lead, the power of their stories often overshadowing caveats about medical plausibility. Despite admonitions from doctors (including Hanna-Attisha) that the effects of lead poisoning are typically "invisible," or visible only over the long term, many parents in Flint believed they could already detect changes in their children: increased aggressiveness, impulsiveness, fatigue, forgetfulness. Reports started to appear of an epidemic of misbehavior in the schools, with some teachers saying they had never seen anything like it in all their years in the classroom. Speaking of her own family, Flint mother Tammy Loren captured a common sentiment, echoed in much of the media coverage of the crisis: "They're not the same kids."²⁸

The same uncertainty that underpinned expansive attributions of harm could also, however, lend itself to far narrower interpretations of the damage done by the water that clung more tightly to strict probabilities and hard data. One number kicked around by skeptics like Rep. Canfield was "43," the number of residents (twenty-three of them young children) found to have lead poisoning during the surge of testing from October to December 2015—less than 2 percent of those tested.²⁹ It was a gross underestimate of past exposure to be sure, but still a vanishingly small figure when considered against Hanna-Attisha's plea on behalf of 150,000. Two years after Canfield and Hanna-Attisha's exchange, a paper published in the *Journal of Pediatrics* went even further, claiming that there was no statistically significant increase in blood lead levels in Flint in 2014 to 2015 at all, and that whatever lead exposure took place had never risen to "the level of an environmental emergency."³⁰ In response, Hanna-Attisha doubled down on her claim that the baby-formula factor meant that all existing data on blood lead levels massively underestimated exposure.³¹ As the debate over the severity of the harm done by lead ramped up, spilling into the pages of the *New York Times*,³² Flint activists grew increasingly concerned that an effort was underway to erase the crisis entirely. Appearing at a board of managers meeting at Hurley Medical Center in May 2018, they denounced a proposal by local doctors to describe Flint children as lead-*exposed* rather than lead-*poisoned*, calling it "preposterous."³³

If activists were concerned to ensure that the effects of lead were not minimized, however, they were even more concerned to make another point:

there was much more to be worried about in Flint than lead alone. In fact, it is no exaggeration to say that for the activists, as for many other members of the community, the Flint water crisis *was never a lead-in-water crisis*—at least not *only* that, not nearly. The “crisis” was the sum total of everything that residents had suffered since the switch to the river in 2014, and were likely to suffer in the future as a result of compromised health and degraded infrastructure. It included, of course, whatever harms lead was responsible for and the costs associated with removing lead from the water system. But it included much more, too: a plethora of physical ailments residents blamed on other contaminants, the profound psychological burden caused by the crisis, and damage to personal property and to parts of the water system not directly associated with lead. Whenever the tendency to frame the water crisis as a lead crisis obscured its other consequences, or inspired declarations that the crisis was over, it became, as we will see, a target of the activists.

If looking at the crisis in its totality offered a richer portrait of harm, however, it did not necessarily eliminate ambiguity around the causes and quantities of particular harms. Surrounding each aspect of the crisis mentioned above was a similar tug-of-war between worst- and best-case interpretations of what the water had wrought. When residents were alerted to the presence of high levels of carcinogenic chlorine byproducts (total trihalomethanes) in the water in January 2015, for example, it became common to blame them for a host of skin and lung problems, as well as miscarriages and cancers of various kinds. But officials countered by pointing out that levels had only been above the federal maximum of 80 parts per billion (ppb) for about six months (the highest reading coming in at 99 ppb) and that for most people exposure to the chemicals was only risky if it took place over many years. Similarly, the popular belief that Flint was in the grip of an epidemic of rashes and other skin problems—even after the reconnection to Detroit water—was challenged by a CDC study that could not confirm that rashes were more prevalent in Flint than elsewhere (at least by 2016) or establish with any certainty that what rashes did exist were caused by the water.³⁴

It was harder for officials to brush aside the news that broke in January 2016: during the eighteen months when Flint was on the river, Flint and Genesee County had experienced one of the worst outbreaks of Legionnaires’ Disease (a severe form of pneumonia caused by the waterborne bacterium *Legionella pneumophila*) in U.S. history, resulting in at least twelve deaths. The failure to alert the public to the outbreak when it was still ongoing

became the basis of involuntary manslaughter charges filed against several state officials. But here, too, there was plenty to argue about. The state maintained that the cause of the outbreak was not the water source switch but rather a maintenance lapse at McLaren Hospital, one of Flint's two major healthcare facilities. A retrospective analysis led by Sammy Zahran and Shawn McElmurry, however, suggested otherwise, demonstrating that 80 percent of Legionnaires' cases in 2014 to 2015 could be explained by the switch and revealing a strong correlation between contraction of the disease and low household chlorine residuals.³⁵ In response, the state dismissed the conclusions, accusing the research (despite having funded it) of having "numerous flaws."³⁶

Even if one accepted that the source switch was the cause of the outbreak (the activists' feeling on the subject was something like "*duh*"), there was still a debate to be had over how many people were sickened and killed. Legionnaires' is a notoriously underdiagnosed disease, often mistaken within clinical settings for generic pneumonia, and some research in Flint suggested that the serogroup of legionella most prevalent there was especially liable to be missed in urine antigen tests.³⁷ It was entirely possible, then, that at least some of the 177 people in the area who died from "pneumonia" between spring 2014 and fall 2015 were in fact Legionnaires' victims.³⁸ The worst-case interpretation of the data favored by activists (who were suspicious that misdiagnoses were part of a "cover-up"), held that *many* of these people had died from Legionnaires', and that many more who had been diagnosed with pneumonia and survived had probably had the disease too. At the other end of the spectrum, however, the state contested even the two cases chosen as the basis of the involuntary manslaughter charges, arguing that these residents had actually died of other health conditions.³⁹

The psychological harms suffered by Flint residents sparked another kind of debate.⁴⁰ Although even harder to quantify with any exactness,⁴¹ these harms were everywhere in evidence, and there was little doubt they were severe. Residents faced feelings of guilt for having unwittingly exposed their loved ones to injury, and anxiety for their children's futures. They faced feelings of uncertainty and constant vulnerability, never sure what would emerge from their taps and uneasy within their own homes. They faced the loneliness of avoidance by friends and family wary of visiting. They faced feelings of anger, grief, depression, despair. They faced the fatigue of having to trek daily to water distribution sites and open their doors repeatedly to

aid workers and researchers. Then there was the catastrophic breakdown in trust—trust in political and scientific authorities, trust between members of the community, trust in the future. There was the humiliation of having paid for one's own poisoning. There were the children who learned to think of themselves as irreversibly damaged, less capable than their peers. There was the triggering of historical traumas within the African American community in particular, as residents found in their present-day travails echoes of past abuses like the Tuskegee Experiment, pogroms, and Jim Crow. There was the general feeling that the people of Flint didn't matter.⁴²

Although these effects of the crisis were not in dispute, there was some controversy over who was to blame for them. The “kicking and screaming” that was necessary to get officials to take action, wrote Kevin Drum of *Mother Jones*, led to vast overstatements of the physical trauma residents, and especially children, had experienced. The claim that “irreversible brain damage” had been “inflicted on every single child in Flint” (to quote filmmaker Michael Moore) was “panicking children into thinking they've been turned into idiots.”⁴³ Marc Edwards, similarly, lamented that turning the crisis into a political battleground had made Flint children into victims twice over, casting them as the tragic figures in a “victim narrative” premised on the assumption that “their lives will be less fulfilling, less productive.”⁴⁴ He also suggested repeatedly that the activists themselves were stoking fear, uncertainty, and mistrust in Flint by promulgating scientifically dubious claims about contaminants in the water beyond lead and unfairly impugning the motives of the scientific authorities and political officials who were trying to help (a subject taken up at greater length in chapter 7).

Moving beyond bodies and minds, the damage done by the water to Flint's infrastructure was perhaps the most tangible of all, but even here there was room for disagreement. Edwards estimated that during the city's eighteen months on Flint River water, its pipes—many already overdue for replacement—aged the equivalent of at least ten years.⁴⁵ No one argued with that assessment, but gauging its implications meant deciding what all needed to come out of the ground. If the pipes could be “healed,” as Edwards maintained, there was little reason to spend tens of millions of dollars to replace them, at least not urgently. On the other hand, if the activists were right to demand, as they sometimes did, that the whole water system be replaced, the bill could run as high as \$4 billion—the estimated cost of excavating and replacing every pipe in the city plus rebuilding aboveground.⁴⁶

Then there was the matter of damage inside homes. As one would expect, the corrosive water took a toll on interior plumbing, fixtures, and appliances like hot water heaters and washing machines—damage estimated at \$310 million.⁴⁷ But how was an individual homeowner to prove that any particular component of their household infrastructure was destroyed by the water? Did my ten-year-old hot water heater burst in 2016 because of corrosion caused by eighteen months of river water, or would it have happened anyway? There was even doubt about the effects of the water crisis on overall home values, which everyone expected would plummet below even their abysmally low starting point. Residents frequently asserted that, because of the crisis, their homes were worth little to nothing, and at least one analysis found that “Zip Codes in Flint witnessed a 24 percent reduction in the number of homes sold, a 13 percent reduction in inventories (or homes listed for sale), and a 14 percent reduction in the average price of transacted homes” following the city’s declaration of emergency.⁴⁸ Confusingly, however, it was reported on multiple occasions that values actually went up rather than down during the crisis years.⁴⁹

Even if one consistently adopts a best-case perspective, sizing up the totality of harm attributable to Flint’s contaminated water can be a bewildering task, and it is hard not to conclude, with the activists, that from April 2014 onward Flint residents underwent an ordeal unlike anything most Americans have ever experienced. For all of the reasons mentioned, however, rooting activist demands in distributive claims was not always sufficient. Skeptics could argue that the water was not, in fact, the source of most of the ills attributed to it, that some harms (particularly psychological ones) were the fault of the activists themselves, and that Flint’s bid for priority in the distribution of scarce resources was unpersuasive given the existence of equivalent needs, or worse, in other cities. The naysayers surfaced only occasionally in public discourse and were usually drowned out by the overarching consensus that Flint was a national embarrassment that called for quick and decisive remedial action. But the general feeling among activists was that behind the scenes, particularly at the state level, the belief that the crisis was overblown was very much an influence on the thinking of officials.

This is why it was so critical that when pressed as to why Flint should come “first,” Flint’s water warriors always had an answer in reserve, an answer that could trump any attempt to play up the ambiguities and uncertainties of the crisis and play down its harms. The reason why the Flint water

crisis was different from other crises, why it was especially heinous, why it deserved to be a state and national priority, was that Flint was not just poisoned, but poisoned by *policy*. It was poisoned because residents were stripped of their self-determination and rendered vulnerable to the criminal neglect of the state. Looking beyond the outcomes of the crisis to its origins led to the conclusion that the distributive injustices inflicted—however one cared to rank them with respect to their severity—were the products of prior injustices related to the denial of democracy.

Justice and Democracy: Beyond Distribution

Flint activists knew that without establishing clear lines of responsibility for the water crisis, no amount of demonstrable harm would result in the help the city needed. They knew, in other words, that their calls for justice had to have a “retributive” aspect, pointing not just to wrongs but to wrongdoers who could be held accountable for rectifying those wrongs. At the most general level, the activists demanded that those responsible “fix” what they “broke,” but also, on occasion, that they be arrested and imprisoned. In some cases this was phrased as a blanket demand that “people should go to jail for what’s happened”⁵⁰ or even that “they should all go to jail.”⁵¹ In others, it was phrased as a focused demand that singled out specific actors, particularly Governor Snyder.⁵²

Just as activists’ claims about harms caused by contamination were locked in a dialectic with official proclamations about the safety of the water, their attributions of blame for the crisis were made within a context shaped by officials’ attempts to deny or minimize their own culpability. In the early days of the crisis especially, there was much passing of the buck back and forth between officials at various levels of government. By the beginning of 2016, the State of Michigan had officially accepted primary responsibility and Snyder had personally apologized for the crisis. But as explored in the next chapter, his insistence on framing the crisis as the result of a technical blunder caused by a few “career bureaucrats” had the effect of narrowing the scope of the state’s responsibility as much as possible.⁵³

When Michigan Attorney General Bill Schuette launched a criminal investigation into the crisis on January 15, it initially appeared that his focus would be equally narrow.⁵⁴ He first brought charges against some of the very “bureaucrats” referenced by Snyder—relatively low-level employees at

the MDEQ and Michigan Department of Health and Human Services, as well as some of their collaborators at the city level. The charges were serious enough—they included misconduct in office, tampering with evidence, and conspiracy—and few denied that they were well deserved. But Schuette's choice of targets could also be seen as sacrificial scapegoating intended to draw attention away from the real power players. In an interview on MSNBC, activist Melissa Mays praised the charges but expressed her hope that Flint's emergency managers and Snyder would be next, because "at the end of the day, they're the ones that made the decisions."⁵⁵

Few actually believed that Schuette would make the leap from prosecuting bureaucrats to prosecuting high-profile political appointees of the Governor, much less the Governor himself. But Mays's wish was at least partially fulfilled when, in December 2016, Schuette announced felony charges against two of Flint's four emergency managers, Darnell Earley and Jerry Ambrose. The charges focused on their involvement in financial finagling that set the City of Flint on a course to join the Karegnondi water pipeline project and created pressure to use the Flint River as a cost-saving water source in the interim (a story told in Chapter 3). But in the charges some saw glimmers of a broader critique of the emergency manager system as a whole: Schuette chastised Earley and Ambrose for having "put balance sheets ahead of Flint residents," taking what appeared to be a shot at the philosophy of fiscal austerity at the heart of the emergency manager law. Flint Mayor Karen Weaver depicted the charges as a welcome repudiation of the system that had "taken the voice of the people and taken our democracy,"⁵⁶ and Congressman Dan Kildee called them "an indictment not only of [the emergency managers'] decisions, but an indictment against the administration's failed emergency manager law that contributed to this crisis."⁵⁷ Statements like these implied that the crimes allegedly committed by Earley and Ambrose were not just misdeeds by bad actors, but products of the political context created by emergency management. This claim—the claim that emergency management, by eliminating democracy, enabled or even encouraged decision makers to act abusively and recklessly—was central to what I will later call the "political" narrative of the crisis.

There is a long history of tracing the roots of environmental injustices back to questions of popular influence over and involvement in decision-making processes. Although much of the focus of the early environmental justice movement was on distributive injustices—particularly the disparate

health burdens borne by poor, majority-minority communities living near polluting facilities⁵⁸—concerns about popular exclusion from decision making were also prominent. They reflected the belief, in Iris Marion Young's words, that democratic decision-making procedures are both "an element and condition of" social justice more broadly.⁵⁹ As an "element" of justice, democracy entered into some of the Principles of Environmental Justice developed at the First National People of Color Environmental Leadership Conference in 1991, including the right of all peoples to "political, economic, cultural, and environmental self-determination" and the right to "participate as equal partners at every level of decision making."⁶⁰ Since then, the emphasis on "procedural" justice (or conceptual cousins like "participatory" justice) within the environmental justice literature has only grown stronger.⁶¹

One major reason for this turn toward procedural justice is precisely the fact that distributive justice frameworks are often plagued by ambiguities that limit their power when applied to environmental contamination events. As we have seen, efforts to quantify exposure to contamination can be hamstrung by inadequate data and efforts to quantify harm can bog down in complex questions of causation, making it difficult or impossible to demonstrate disparate impacts. Furthermore, when outcomes are shaped by a diverse set of actors operating more or less independently, as well as by underlying sociological factors like race and poverty, it can be hard to pin down who, exactly, is to blame for them. For these reasons, legal claims dependent on proving disparate distributional impacts have had difficulty getting much traction within the American legal system, which usually demands hard evidence of cause and effect, and, in cases of alleged discrimination, identifiable culprits acting out of ill intent.⁶²

The benefits of being able to appeal to procedural justice when evidence of distributive injustice is insufficient is perhaps nowhere better illustrated than in the second-most important environmental justice story ever to come out of Flint: the case of the Genesee Power Station. In the early 1990s, the predecessor of the MDEQ, the Michigan Department of Natural Resources (MDNR), received a permit application for a wood-burning incinerator, to be sited in Genesee Township just over the border from Flint. Whereas Genesee Township itself was overwhelmingly white, the closest neighborhood to the proposed site was predominantly African American and already surrounded by several other polluting facilities. The community's biggest concern about the incinerator was that it would contaminate the air with lead

as it burned wood coated in lead-based paint from demolished homes—in an area, moreover, where blood lead levels were above average to begin with.⁶³

In response to the proposal, a group led by Father Phil Schmitter and Sister Joanne Chiaverini of Flint's St. Francis Prayer Center took the innovative step of filing a Title VI claim with the EPA alleging that the siting of the plant constituted environmental racism and violated residents' civil rights. The first part of their claim focused on the distributive injustice of the plant siting, given its proximity to an already-vulnerable and disadvantaged population and the likelihood that it would cause disproportionate harm. The second part of their claim, however, focused on the process by which the permit had been approved. Permit hearings had been poorly publicized and held as far away as Lansing, causing logistical headaches for residents of limited means who wanted to attend them. At one key hearing, residents were given insufficient time to review proposed changes to the permit before the public comment period, and when the meeting ran long, several white speakers were allowed to give their testimony out of order to accommodate schedule conflicts while black speakers were not accorded the same courtesy. When the MDNR finally got around to holding a more accessible meeting near the incinerator site, it employed uniformed and armed officers to watch over the proceedings—a decision, the complaint alleged, that contradicted the department's usual practice and was tinged with racial bias. And although the crowd was by all accounts civil, officials ended the meeting abruptly in the middle of testimony by an African American resident.

The activists responsible for the discrimination claim would have to wait two-and-a-half decades for a decision by the EPA, a delay that was widely seen as a sign of the agency's shameful disregard of civil rights. In fact, the EPA had not entirely ignored the complaint, making a concerted effort to evaluate the activists' claims of disparate impact. But given the incinerator's proximity to other toxic facilities, among other confounding variables, it had found the matter to be too complex to settle conclusively. It was unwilling, in other words, to say that the siting of the incinerator—which ultimately went forward despite community opposition—constituted a distributive injustice.

What the EPA did find, in an unexpected and virtually unprecedented ruling announced in January 2017, was that racial discrimination had occurred during the permitting process. African Americans, it concluded, had been "treated differently and less favorably than Whites."⁶⁴ The agency

concurred with the activists' criticisms of the public hearings, but found that the problem was not just with a few poorly run meetings. Rather, on a structural level, the MDNR lacked the "procedural safeguards" required by nondiscrimination regulations,⁶⁵ as well as a defined plan for public participation.⁶⁶

The ruling also suggested that when the MDNR became the MDEQ, it passed on these procedural shortcomings. In 2014, just before the water crisis rose to public attention, the EPA finally began to apply informal pressure to the MDEQ to address these longstanding issues. After its efforts were largely rebuffed, and after the department's oversights in Flint became a national scandal, the agency issued its long-awaited ruling, implying that the MDEQ's decades-long failure to take procedural justice seriously had contributed to the water crisis. In fact, as pointed out by the authors of the ruling, the crisis had spawned a new civil rights complaint that harkened back to the Genesee Power Station affair, raising "similar issues regarding public participation."⁶⁷ In response, the EPA promised to redouble its efforts to evaluate MDEQ's "procedures for public notification and involvement."⁶⁸

In addition to inspiring heightened scrutiny of decision-making processes at the MDEQ, the water crisis also helped to revive a related effort to establish a statewide environmental justice plan that would create new inlets for popular influence at the state level.⁶⁹ An earlier effort in 2008 and 2009 to produce such a plan, which derailed after opposition from business and industry, included a proposal for an Interdepartmental Working Group at the state that would receive petitions about environmental matters directly from aggrieved residents and investigate the concerns they raised. According to environmental law expert Sara Gosman—one of the drafters of the plan—had the state implemented this recommendation the water crisis would have been "much less likely." The petition process, she maintains, "would have allowed Flint residents to elevate their concerns" and increased their chances of being taken seriously by state departments like the MDEQ.⁷⁰

As illustrated by the above examples, one reason for invoking the principle of procedural justice is to bring attention to flaws in already-existing decision-making processes—a lack of nondiscrimination protections, for example, or a concrete participation plan, or a petition process. The EPA ruling in January 2017 and the formation of a new state-sponsored Environmental Justice Work Group the next month helped to spark discussion about how these kinds of flaws could be addressed in light of the water

crisis, focusing on mechanisms for enhancing public influence over state government.⁷¹

From the perspective of Flint activists, however, concerns about flimsy procedural safeguards within state departments were trivial next to the real matter at hand: the state's complete suspension of democracy in Flint and the deeply unpopular decisions about water (and a great many other things) it enabled. The problem was not, then, just with surface-level "procedures" and the distributional inequities they produced, but with the structurally disempowered position the city found itself in and the political-economic philosophy that had shaped it. The activists' emphasis on democracy, in other words, took them beyond the kinds of concerns that environmental justice activists are sometimes accused of getting hung up on, fostering a wider-ranging analysis of the origins of the crisis. Because the political architecture that activists blamed for Flint's poisoned water was a creation of Governor Snyder and other state politicians, this analysis added extra weight to the claim that the state should put Flint "first." But just as important, it meant the fight for justice in Flint could not stop at reparations, or criminal convictions, or modest reforms to state permitting processes. The fight would not be over until democracy was a reality: not just in the negative sense of freedom from emergency management, but in the positive sense of a community of people empowered to take charge of their water, their infrastructure, their health, their city, and their future.