Politically Unhealthy: Flint's Fight Against Poverty, Environmental Racism, and Dirty Water

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ABSTRACT

The social force of race in relation to natural resources plays a prominent role in which communities are disproportionately affected by pollution. Scholars have described how people of color are disproportionately victims of environmental discrimination and disparities because they lack the necessary social capital to bring attention to their plight, as demonstrated by the case of the Flint, Michigan, Water Crisis. In this article, we use a critical race theory lens to explore how the Flint Water Crisis constitutes a case study of environmental racism. More specifically, we discuss the public health implications of environmental racism on the residents of Flint and conclude with a discussion of the overall implications of environmental justice for public health and social science research.

KEYWORDS: Flint Water Crisis; environmental racism; critical race theory

Over the course of the 20th and 21st centuries, much attention has been paid to the inequitable exposure to pollution based on socioeconomic status. In the United States, sources of pollution, such as toxic waste dumps, incinerators, manufacturing plants, and other facilities, are typically located in lower income neighborhoods. The social force of race in relation to natural resources plays a prominent role in which communities are disproportionately affected by these environmental factors. According to Hines (2015),

racially based environmental discrimination was made apparent in 1971 when President Nixon's Council on Environmental Quality

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acknowledged that racial discrimination negatively affects the quality of environment among the urban poor. (pp. 198–199)

Scholars and activists have discussed extensively how people of color are more exposed to toxic waste, are disproportionately the victims of environmental discrimination and disparities, and suffer excessively from environmentally related health problems (Bullard, 1992, 1993, 1994, 2000, 2001; Hines, 2015; Loh & Sugerman-Brozán, 2002; Mohai & Saha, 2007; Ringquist, 2005). The term used to describe this phenomenon is *environmental racism*: racial discrimination in environmental policy making, decision-making, and practice that results in inequitable distribution of environmental burdens based on race or color (Bullard, 2000). Most communities that are victims of environmental racism are poor and African American or Latino (Bullard, 1992, 1993, 1994; Bullard & Wright, 1986; Hines, 2001, 2015).

The challenge for environmental justice movements continues, as courts and governmental agencies typically require solid evidence of intentional discrimination in claims of environmental racism. However, a wealth of evidence exists that points to the linkages between pollutants and the hazardous exposure of the communities that lie in close proximity to them. Numerous studies have examined the ill-health effects of exposure to pollutants (Downey & Willegen, 2005; Hines, 2015; Mohai & Bryant, 1992). Additional studies have linked diseases such as cancer, cardiovascular disease, birth defects, respiratory problems, and a host of other health complications to exposure to pollutants from industrial facilities (Collins & Williams, 1999; Roux et al., 2001; Geschwind, 1992; Lagatos, Wessen, & Zelen, 1986). Moreover, several scholars have discussed the differential environmental risks based on race and socioeconomic status (Bryant, 1995; Institute of Medicine, 1999; Mohai, 1996; Mohai & Bryant, 1992; Szasz & Meuser, 1997). While some would argue that class is the biggest indicator, research has shown that race cannot be separated from class because race helps to perpetuate a system of inequalities that create a space for acts of environmental racism (Charles, 2003; Feagin, Vera, & Batur, 2001). In response, environmental justice efforts attempt to promote practices that enable equal protection. However, as critical race theory scholars have contended,

an unfortunate narrative frames racial practices like environmental racism as historical incidences that no longer exist (Delgado & Stefancic, 2001; Dickinson, 2012; Tate, 1997). Yet, as the case of the Flint, Michigan, Water Crisis demonstrates, spaces continue to be sites of racialized practices and discrimination as the underlying historical and political economic relations of racial inequality are perpetuated in the present day. Unfortunately, the demographics of Flint, Michigan, have made it the poster child for a community that was most at risk to experience the failure of our infrastructure in severe ways. The population of Flint is 56.6% Black, with a median household income from 2009 to 2013 of \$24,830. Additionally, 41% of the population lives below the poverty line, and only 11% holds an education of at least a bachelor's degree (U.S. Census, 2017). Consequently, the Flint Water Crisis represents an ideal environmental racism case study because it is a well-documented crisis that could have been prevented, echoing Rothstein (2016) that "Flint matters because the water utility industry can do better. The crisis, tragic in so many respects, also presents an opportunity for lasting benefit—benefit from recognizing that we are Flint" (p. 37). To understand the systematic factors that led to the Flint Water Crisis, we will employ a critical race lens to see how Flint has been a crisis in the making.

Flint Water Crisis

In April 2014, the city of Flint, Michigan, changed its water supply from Detroit-supplied Lake Huron water to the Flint River, as an interim source to save money while overhauling its supply system. Moving forward, it is important to emphasize that the single, unitary motivator for the switch from Detroit-supplied water to water from the Flint River was cost (Felton, 2016; Lin, 2016; Walters, 2016). Shortly after the switch, residents noted concerns regarding water color, taste, and odor (Carmody, 2016; Ganim & Tran, 2016; Ingraham, 2016; Laylin, 2016; Lurie, 2016). Findings from FlintWaterStudy.org concluded that the water in Flint is 8.6 times more corrosive than water in Detroit (Siddhartha, 2015). However, independent tests by the Flint River Watershed Coalition contradicted this characterization. Their testing

found chlorine levels ranging between 49 and 81 mg/L.¹ Environmental Protection Agency (EPA) secondary (nonmandatory) limit for chloride in drinking water is 250 mg/L, which is well above the level of the raw water from the Flint River, and the danger in exceeding this limit is merely “salty taste,” implying that the river itself cannot be to blame for corrosion (Environmental Protection Agency, 2017). This suggests that, although the river certainly has faced a sordid history with pollution, something else must have caused the corrosion that caused lead to leech into the drinking water.

Internal discussions and reports suggested that Flint’s water was so corrosive as a result of the City of Flint Water Treatment Plant itself. Prior to switching its water source to the Flint River, the City of Flint bought all of its water from the City of Detroit. As a result of this long-standing deal, the Flint Water Treatment Plant ran only 4 days a year, serving primarily as an emergency backup (Schuch, 2014). Before the plant reopened, a series of poor decisions and oversights that would propel the crisis had already been made. Internal e-mails from Mike Glasgow, Flint’s laboratory and water quality supervisor, revealed a hurried operation to reopen the plant by Detroit’s April 25, 2014, deadline: “if water is distributed from this plant in the next couple of weeks, it will be against my direction . . . but they [city officials] seem to have their own agenda” (Egan, Spangler, & Shamus, 2016).

In response to increased bacteria levels in the city water soon after the shift, the city increased the amount of chlorine it used to treat the water, in turn causing increased levels of THM, a dangerous by-product of the disinfection process (Gottesdiener, 2015). In response to this problem, a report conducted by Lockwood, Andrews, & Newman Inc. recommended increasing the treatment dosage of ferric chloride, a coagulant that could help reduce THM levels (Gottesdiener, 2015). These two actions, however, had the unfortunate side effect of making the posttreatment water significantly more corrosive than even the pre-treatment water. If the city had added any kind of corrosion inhibitor, as had been present in the water they purchased from Detroit, this would have been the end of their problems. However, city officials worried that adding phosphates, a common inhibitor, might feed bacterial growth, as those same compounds are frequently used in fertilizers (Flesher,

2016). Disturbingly, Flint officials knew that increasing the water's ability to corrode, without adding *any* sort of inhibitor, was likely not to end well; yet, they chose to proceed with a wait-and-see approach.

In a September 3, 2016, email to numerous state and local officials, then public works director Howard Croft said a different concern had been identified. As the city water plant was designed to begin treating river water, "optimization for lead was addressed and discussed" with an engineering firm and the Michigan Department of Environmental Quality (MDEQ). Croft continued, "It was determined that having more data was advisable prior to the commitment of a specific optimization method" (Flesher, 2016).

We believe that this choice to take a wait-and-see approach, in the face of the myriad potential health problems caused by lead poisoning, demonstrates a clear negligence on the part of the City of Flint, yet the Flint River has become the scapegoat for the city's inappropriate action (Carmody, 2016; Laylin, 2016). While the pollution in Flint certainly contributed to the crisis, emphasis on historic pollution rather than recent misconduct deflects blame from the people who directly allowed the crisis to occur. Therefore we agree with Brulle and Pellow (2006) that the exploitation of the environment and human populations are linked and that the key social dynamics that create this environmental inequality are (a) the functioning of the market economy and (b) institutionalized racism. In this article, we use a critical race theory (CRT) lens to argue how the Flint Water Crisis constitutes a case of environmental racism and to what extent. More specifically, we discuss the public health implications of environmental racism on the residents of Flint, Michigan, in terms of the ongoing water crisis and conclude with a discussion of the overall implications of environmental justice for public health and social science research.

Critical Race Theory

CRT was developed in the mid-1970s as a number of scholars noticed that there was a need for new theories and strategies to combat the more covert forms of racism that were gaining ground in the era. The basic CRT model consists of five elements: (a) the centrality of race

and racism and their intersectionality with other forms of subordination, (b) the challenge to dominant ideology, (c) the commitment to social justice, (d) the centrality of experiential knowledge, and (e) the transdisciplinary perspective (Solorzano, 1997; Solorzano & Yasso, 2000). The heart of CRT lies in the rejection of color-blind orientations of equality, expressed as “rules that insist only on treatment that is the same across the board, [as this] can thus remedy only the most blatant forms of discrimination and instead calls for aggressive, color conscious efforts to change the way things are” (Delgado & Stefancic, 2012, p. 49). Moreover, CRT argues for race-conscious decision-making as a routine, nondeviant mode to be used in distributing positions of wealth, prestige, and power (Guinier, 1995; Harris, 1995).

CRT also uniquely relies on narratives to substantiate claims. According to DeCuir and Dixson (2004), “an essential tenant [*sic*] of Critical Race Theory is counter storytelling” (p. 27). Deconstructing and understanding narratives can be used “to reveal the circular, self-serving nature of particular legal doctrines or rules” (Delgado & Stefancic, 2001, p. xvii). While many scholars argue for universalism over individual narratives, CRT emphasizes the role of individual narratives to the sense-making process, as we understand context through narrative. The unique focus on narratives coupled with a call for race-conscious decision-making provides a useful lens when addressing the complexities of environmental racism overall, and in particular the Flint Water Crisis.

Flint and Environmental Racism

The case of the Flint Water Crisis demonstrates how the market economy and institutional racism have interacted in a manner to create a space filled with discrimination toward poor minorities. However, to understand the severity of the situation, we must look at the history of Flint. The Flint Water Crisis has been 150 years in the making due to the toxic legacy of the automotive industry operating in the city without penalty, in part because of weak environmental regulations (Carmody, 2016; Craven & Tynes, 2016; Mailman School of Public Health, 2016; Morley, 2016). The weak environmental regulations were due in part to

the long-standing perception of the adverse economic effects of environmental policies. Therefore this crisis lies at the intersection of this lengthy history of environmental pollution, racism, and shortsighted governance. Although we argue that the most tangible smoking gun for the crisis was the failure to use an inhibitor, such steps would not have been necessary were the pollution addressed appropriately—Flint is a derivative of a century of manipulation of the city's residents (Rosner, 2016). Thus we must examine every step at which these damning decisions have been made to apply CRT properly.

Starting in the 1830s, industrial pollutants started to be introduced into the Flint River by way of the first lumber mills in the area (Carmody, 2016). Soon afterward, paper mills started to settle into the city, and with their arrival came chemical processing. The trend of pollution continued as the city began to grow, reaching a population of 150,000 by 1930, as various industries arrived, such as the carriage and automobile industries (Carmody, 2016). During this time, untreated waste was being discharged downstream, and the effects of tainted water could be seen when the fish began to disappear, which was determined to be a result of lowered oxygen levels in the river (Carmody, 2016).

The problem of water pollution grew as General Motors increased its presence in the area in the 1940s through an investment strategy focused on rural and suburban areas, resulting in the creation of eight industrial complexes from 1940 to 1960 (Hakala, 2016). Although there were discussions about water pollution in the 1940s, no regulations forced businesses to treat and dilute their waste with city water until the 1950s (Carmody, 2016). Following these new regulations was a demand from the Michigan Water Resources Commission to Flint in 1960 to "abate unlawful pollution of the Flint River" (Carmody, 2016). As a result, in 1967, Flint started to buy its water from Detroit, which continued to be the case until spring 2014 (Carmody, 2016; Mailman School of Public Health, 2016). General Motors helped to worsen the situation because by the 1980s, most of General Motors's Flint plants were marked for potential noncompliance with EPA standards, partially leading to the closure of existing plants in Flint one by one (Carmody, 2016). General Motors's mistreatment of the people of Flint continued because the company had knowledge that the water supply was tainted

with high levels of chloride, which was rusting the company's engine blocks (Colias, 2016). Rather than notify officials, General Motors simply switched its water supply, allowing the company to avoid a financial pitfall while the residents of Flint suffered.

However, simply to blame General Motors for negligence would paint an inaccurate picture of the forces that collided in Flint. The state government made numerous missteps in its decision-making approach, making them culpable for this crisis. When Michigan governor Rick Synder was debating whether to change the water supply, he did not do any pilot testing of Flint River water (Masten, Davies, & McElmurry, 2016). The only pilot test occurred in 2002, a treatability study, meaning that the government was working with outdated information about the water supply (Lockwood, Andrews, & Newman Inc., 2015). When you consider the fact that the American Water Works Association clearly recommends that "if a municipality is considering changing how its source water is treated, the potential effects on the corrosivity of the treated water and the need for corrosion control should be evaluated," and that no sufficient testing was ordered, the municipality did not look out for its residents (Masten et al., 2016; Muylwyk et al., 2014). This circulation of inaccurate information continued when the MDEQ incorrectly identified the Flint water supply as being safe for human use, which was then understood as accurate by other state agencies (Campbell, Greenberg, Mankikar, & Ross, 2016; Flint Water Advisory Task Force, 2016).

This poor decision-making continued even after government officials began to suspect a problem. Some of Synder's staff realized the severity of the Flint water situation and attempted to advocate for a change in water supply, despite General Motors's large role in creating the problem. For instance, Dennis Muchmore, the governor's chief of staff, stated in a February 5, 2017, email,

Since we're in charge, we can hardly ignore the people of Flint. After all, if GM refuses to use the water in their plant and our own agencies are warning people not to drink it . . . we look pretty stupid hiding behind some financial statement. (Covert, 2016)

Additionally, like others on Synder's staff, policy makers realized that although General Motors used the Flint area until it was no longer economically viable to do so, the State of Michigan still had a responsibility to the people of Flint. However, instead of moving forward with switching the water supply, it took over a year for a solution to be partially implemented. This history, coupled with a massive decline in industrial and residential tax bases and lower city population densities, reduced the water demand in the distribution system, exacerbating problems with lead corrosion (Lewis, 1965; Zimmer & Hawley, 1956). Additionally, Carmody's (2016) investigation shed light on the Flint River's history with pollution, noting account after account of illegal dumps, industrial carelessness, and the mess that followed.

Even more troubling is that several former Flint residents were in positions of power within Michigan government. For instance, Michael Gadola, a former Flint resident and a member of Snyder's legal counsel, voiced his concerns throughout the governor's administration, but his opinion was never requested by Darnell Earley, the state-appointed emergency manager of Flint in April 2014 (Covert, 2016). Growing up in Flint, Gadola knew that taking water from the Flint River was a poor choice, but his position of power did nothing to help Flint residents, because the economic cost of an imbalanced budget was too much to bear (Covert, 2016). Compounding this, the MDEQ, the agency with the responsibility of keeping drinking water safe, had limited resources to monitor Michigan's water (Roelofs, 2016). This combination demonstrates one particular instance of environmental racism within the Flint Water Crisis: Despite personal narratives and a paper trail detailing the economic mismanagement, the people of Flint were continually ignored.

Many residents also took note of how their voices had been ignored. For example, resident Diane Thornton stated that the Flint Water Crisis was "a blind disaster" and that "if we would have had a tornado or hurricane, they would have rushed in to help us" (Levin, n.d.). Instead of support, Flint residents were and are continuing to be subjected to unfair economic policies. A report by the Food and Water Watch (2016) found that residents of Flint faced the single most expensive water service in the entire country during 2015. The unfortunate irony of this situation was not lost on the residents of Flint, as resident Helena Jones stated:

“We’ve worked hard all our life, and we’ve paid our dues and pay our taxes. And this is what we get” (Berlinger & Netto, 2016). Currently 8,000 Flint homeowners will receive tax liens because of unpaid water bills, which can result in foreclosure of their homes (Delaney, 2017). Furthermore, receiving these liens makes one ineligible for lead pipe replacement (Dennis, 2017). The overpriced water, threat of tax liens, and ultimately those liens disqualifying residents from lead pipe replacement clearly demonstrate to Flint residents that the State of Michigan only considers their lives valuable if they can contribute economically. At this point, even if state officials were to radically change course, the damage would already have been done. Despite assurances that Flint is working to resolve the crisis fully, “nearly three years later, many residents still don’t trust the water. And they trust government officials even less” (Dennis, 2017)—and for good reason.

Most troubling about the Flint Water Crisis is that attention was only raised when a concerned team of physicians started to notice increases in lead levels in children. Attisha, LaChance, Sadler, and Schnepf (2016) tested children under the age of 5 years who had elevated blood lead levels in Genesee County and found a striking increase in the percentage of Flint children with elevated blood lead levels after the water source switch. According to Attisha et al.,

as in many urban areas with high levels of socioeconomic disadvantage and minority populations, we found a preexisting disparity in lead poisoning. . . . Flint children already suffer from risk factors that innately increase their lead exposure: poor nutrition, concentrated poverty, and older housing stock. (p. 286)

Following reports of increased blood lead levels in the children of Flint, who were disproportionately poor and African American, many began to question whether this issue constituted a case of environmental racism (Eligon, 2016; Shafer, 2016). As we have noted previously, the abhorrent series of policies regarding the residents affected by the crisis, as well as the negligence that allowed such a crisis to happen in the first place, most definitely constitute a case of environmental racism. The pollution of the Flint River, as well as the economic conditions suffered

by the people of Flint, created a dangerous intersection at which this crisis could happen. As the crisis played out, the response by state officials, discussed below, has demonstrated fully this systemic racism.

As more and more attention was placed on the crisis through social media and the sharing of narratives of residents, Flint city and Michigan state officials started to lob accusations of blame back and forth at each other. As applying CRT requires identifying the true decision makers, we must wade through this fog of accusations to determine those responsible for policy. Prior to the mass releases of internal e-mails of both city and state officials in 2016, a column penned by Darnell Earley stated,

The decision to separate from Detroit Water and Sewerage Department and go with the KWA [Karegnondi Water Authority], which included the decision to pump Flint River water in the interim, were part of a long-term plan that was approved by Flint's mayor and confirmed by a City Council vote of 7–1 on March 25, 2013. . . . The mayor's approval of the plan and the subsequent near unanimous vote by City Council were in no way coerced, forced or demanded by the state, nor any emergency manager. Council's affirmative vote was supported and signed as an Executive Order by then-Emergency Manager Edward Kurtz on March 29, 2013.

The title of Earley's column, "Don't Blame EM for Flint Water Disaster," clearly demonstrates this article's communicative purpose. However, an email by Harvey Hollins, Michigan's state director of urban initiatives, written 2 weeks prior to Earley's column, stated unambiguously, "It is important to note that council did not take a vote to use Flint river" (Ridley, 2016). For Earley to write a column in which he claims that not only was there a vote in favor of changing the water source but that such a vote was nearly unanimous, 2 weeks after other state officials explicitly noted that no vote took place, seems suspicious under even the best possible interpretation. Furthermore, the most damning instance of a governmental about-face was the purchase of bottled water for government staff well before the state of emergency was declared in December 2015. Although officials claim the decision had no

relationship whatsoever to the question of lead levels, “management and budget department decided to provide water coolers in a Flint state office building after the city sent out a notice saying it had been found in violation of the state’s Safe Drinking Water Act because of high levels of disinfection byproducts” (Oosting, 2016). Ignoring the discussion on whether the government knew about the lead, its decision to limit its own staff’s exposure to potentially unsafe water, while telling its residents not to worry, demonstrates clear negligence.

This represents the intersection of Flint’s troubled history with systemic problems at the governmental level. The State of Michigan stripped away Flint’s ability to make these choices for itself, meaning those making the decisions would not be affected by the crisis. As that crisis unfolded, despite government officials’ knowledge of problems with the drinking water, public officials continued to tell the citizens of Flint that the water coming through their pipes was safe for consumption. Worse yet, as those citizens sought accountability from their government, that government responded by tossing blame back and forth, possibly even consciously lying in the process. When considered against the backdrop of Flint’s demographics, we see that it was only a matter of time before Flint faced such a crisis. Moreover, according to Jones (2017),

[the] inability to afford and have access to self-monitoring water quality systems, absence of education on poisoning symptoms, lack of financial resources to just pick up and leave, and low political power and economic mobility are all factors that aid in vulnerable communities becoming victims to environmental justice.

Brulle and Pellow (2006) explained that the exploitation of the environment and human populations are linked because of the functioning of the market economy and institutionalized racism, which led in this case to environmental racism. As we have emphasized previously, the city of Flint changed its water supply from Detroit-supplied water to the Flint River solely to reduce costs for the government, even in the face of known potential dangers. This initial attention to the bottom line, the subsequent wait-and-see approach to potential dangers from

Flint River water, the gross mishandling of the crisis, the clear economic exploitation through tax liens, and the refusal to replace lead pipes for anyone who cannot afford Flint's astronomic water bills all coalesce to demonstrate the relationship of environmental and human exploitation that is environmental racism. While no one in the government intentionally tried to poison the people of Flint, attempting to enact a color-blind decision-making process, it did poison the people of Flint by ignoring the materiality of the situation (Michigan Civil Rights Commission, 2017).

Implications for Environmental Justice

Investigations into cases of environmental racism have several implications for environmental justice and policy. Populations that have the highest risks of water poisoning are also the least represented politically. Additionally, marginalized people who are at greater risk to be victims of environmental racism and environmental injustice often lack the agency and education to fight back. For this reason, grassroots movements are needed to empower these vulnerable populations. We have seen from the crisis in Flint that local residents occupying policy-making positions will not necessarily result in representative decision-making. For modern and future governments to practice justice for marginalized communities, those communities must make their voices heard on all levels; they cannot merely rely on good faith from the top. Thus any discussion of the Flint Water Crisis would be incomplete without consideration of the tactics we can employ to prevent such a tragedy from happening again. The separation of these discussions, and the consideration of them merely as academic issues, is a privilege that is not enjoyed by those who are actually affected by these crises.

Laurent (2011) outlines four goals that must be achieved for communities to become more empowered: (a) People must have the opportunity to participate in decisions about activities that may affect their environment and/or health, (b) the public's contribution must be able to influence the regulatory agency's decisions, (c) the public's concerns must be considered in the decision-making process, and (d) the decision makers must seek out and facilitate the involvement of the

potentially affected. For grassroots movements to be effective at creating effective policy changes, however, they cannot be a hollow gesture. These movements need to make a genuine effort at understanding the systemic factors that have led to environmental racism but also the lived experiences of those affected by a system of inequality. Otherwise, these grassroots efforts are simply talking for these marginalized groups without considering their perspective, undermining the goal of the grassroots efforts and increasing the likelihood that such crises will reappear in the near future. The crisis in Flint, combined with the insultingly ineffective response to it on both a local and state level, demonstrates that we still have much work to do toward enacting these goals.

Conclusion

It is imperative that we learn from the mistakes of Flint. We have seen the disastrous effects of the failure to acknowledge a history of environmental injustice, combined with current negligence and systemic racism. Having applied CRT, we conclude that, quite simply, the Flint Water Crisis could not have happened in a wealthier, whiter city and therefore is a clear case of environmental racism. Flint city and Michigan state officials felt they had the political capital to take their disastrous wait-and-see approach because their constituents initially lacked the political capital to resist. Yet, as the narrative of a scandal emerged and solidified, state officials continued to feign a publicly ignorant about-face, lobbing blame back on the city officials they had stripped power from in the first place.

Lost amid this political bickering is an entire generation who will face countless health problems from which they have little to no hope of recovery. However, it is possible to change this narrative for future generations, but it starts when we stop ignoring marginalized communities when they have concerns. We cannot simply wait and see when an entire community raises its voice in resistance to the status quo. Rather, we must consider their perspective, because it can help lead to a greater understanding about particular crises. Flint is a tragedy, but to prevent future ones, we must start giving marginalized groups

a seat at the table, increasing their agency regarding decisions about their health and environment.

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Note

1. See <http://flintriver.org/blog/>

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