

Painting Over Racialized Power Structures: The Environmental Injustice of Lead  
Poisoning in the City of Baltimore

**Introduction**

Lead poisoning has always been one prominent chemical issue in the media and in the minds of people across the country, whether through awareness of lead paint in children's toys made in China, or through cases of lead paint on walls of many homes across the United States (Barboza & Lipton, 2007; Haupt, 2007). This paper explores the latter issue, focusing specifically on Baltimore City's history and current events surrounding lead poisoning. Drawing upon statistics in reports from the Centers for Disease Control and Prevention (CDC) and the Baltimore government's own studies on lead toxin levels among children, I present the disproportionately high incidence of lead poisoning and lead exposure among African-American children. I then use an environmental justice framework to prove how these patterns reflect structurally unjust systems, drawing upon historical background and the failed efforts of governmental regulation. This case of environmental injustice is further complicated by the many voices claiming that lifestyle choices and the effects of lead poisoning on IQ are the root causes of social problems within the African-American communities. I interpret and then analyze these claims through the environmental justice lens to show how this allows dominating groups to shirk away from the responsibility of making structural changes that would dismantle these racialized patterns of environmental hazards and increased marginalization. The issue of disproportionately high exposure to lead toxins among the African-American population in Baltimore, MD, presents a dilemma in the environmental justice framework on several levels; not only can this issue be traced back to the

inefficiency of the government to support this community, but the discourse surrounding lead poisoning that allows the privileged to not take any responsibility in the structural social systems that perpetuate racialized trends in both lead exposure and blood lead levels.

### **Review of Literature**

The substantial amount of research done on lead paint levels in Baltimore residences reflects not only an existence of high incidences of toxic exposure, but also a cause for concern for these levels. Despite the abundant research and media reports presenting the statistics, however, there have only been minor attempts to connect these to broader issues of racial disparities, housing segregation, and institutionalized discrimination, in a comprehensive and significant way. In some cases, attempts to determine links have resulted in highly controversial or simply inaccurate assumptions of certain communities (Ball, 2015; Dresser & Wheeler, 2015). There is thus an urgent need to discuss the problematic levels of lead toxicity in the context of more grounded theories and concepts, particularly of those under environmental justice.

Fortunately, health reports and statistics relating to lead paint are readily available. The CDC (2009) has produced significant statistics tracking blood lead levels in children aged one to five years in the United States. The statistics are divided into categories, such as gender, age, healthcare access, and most notably, race and ethnicity. Notable conclusions from these findings are that “children’s blood lead levels continue to decline,” but “levels continue to be the highest among non-Hispanic black children” (p. 2). More recently, the U.S. Department of Housing and Urban Development (2011), or the HUD, has presented its own findings in 2011, also revealing that there were

significant correlations between lead levels in homes and poor households or households of people of color. This HUD report is much more transparent in both its data and method of data collection (HUD, 2011). However, these statistics are too broad in scope when trying to understand the lead paint levels specifically in Baltimore City; this is where the 2013 report on childhood blood level surveillance by the Maryland Department of the Environment (2014) becomes particularly valuable, with its outline of plans to reduce and eliminate childhood lead poisoning. A great flaw in this data, however, lies in the failure to categorize based on characteristics of race or ethnicity and household income, due to an alleged incompleteness of data.

Nevertheless, news and web articles effectively assist in exposing these differences based on racial and socioeconomic characteristics in light of Baltimore's lead paint incidences in housing. Opening with the tragedy of the Baltimorean Freddie Gray's infamous death and his childhood with exposure to lead paint, a FiveThirtyEight article reveals the high rate of lead levels in Baltimorean children compared to the rest of the country, as well as the fact that high risk of exposure is concentrated only in certain areas of the city – with Sandtown, Gray's neighborhood, being one such area (Barry-Jester, 2015). Connecting these pieces and the official data directly to the environmental justice framework exposes the structural racialized systems of inequality in social and economic capital (Pulido, 2000), and would then necessarily bring the issue in conversation with where power lies in the social sphere.

Therefore, social actors on the other side of the victims of lead paint also necessarily come under critical analysis. The ungrounded assumptions of Maryland officials about Baltimore's vulnerable mothers are highlighted in some newspaper articles

criticizing the Maryland Housing Department's uneducated and completely false accusation (Ball, 2015; Dresser & Wheeler, 2015), while a New York Times article details an extremely problematic incident relating to lead paint, where Baltimore residents filed suit against a prominent children's health institute for "knowingly exposing black children...to lead poisoning in the 1990s as part of a study" (Williams, 2011). A grounded analysis of these cases would draw from the National People of Color Environmental Leadership Summit's (1991) "Principles of Environmental Justice" and Rachel Stein's (2004) work on the intersections between gender, sexuality, and the environmental movement; these different components within the environmental justice framework stress the multifaceted nature of the lead paint issue, and the need to comprehensively examine the systems that create the resulting injustice.

Other published works step into controversial territory through hinting that lead paint impairing causes black residents of Baltimore to resort to violent or risky behaviors. A Washington Post article by Terence McCoy (2015a) does this through focusing on Freddie Gray's history with lead paint, implying that Gray's cognitive abilities – and therefore his behaviors, relating to his run-ins with the law and eventually his arrest that led to his death – were significantly, if not exclusively, affected by the lead paint to which he was exposed in his childhood. This analysis is further legitimized by extensive researched-based studies and scholarly articles insisting that there is a significant, scientific link between lead exposure and behavior choices. Jessica Wolpaw Reyes' (2012) study, with its claim that "children exposed to even moderate amounts of lead...will be more likely to exhibit behavior problems in childhood, to engage in risky behavior in the teenage years, or engage in violent or criminal behavior in young

adulthood” and that this correlation is “unique in its scale and scope” (pp. 1-2), and Rick Nevin’s (2000) assertion that “long term trends in paint and gasoline lead exposure are...strongly associated with subsequent trends in murder rates” (p.1) in his study are among many that call attention to these findings. In each of these publications, however, there is an assumption that scientific evidence alone can account for the struggles within Baltimore’s African-American community, allowing for the social structures of institutionalized racism and white privilege to fade in the background of the seemingly subjective, or even apolitical discourse. Such a premise, dangerous in its reductionist and normative rhetoric, has yet to be sufficiently and significantly challenged.

There is a need for such seemingly straightforward, tidy assumptions to be questioned; basing it in the theories of environmental justice would be the best method of analysis. Laura Pulido’s (2000) arguments on white privilege will provide a basis on which to situate this argument in terms of upholding the status quo that allows for certain accepted social placement of blacks. Cole and Foster’s (2001) discussion of environmental racism in their text, *From the Ground Up*, would further this critical analysis in its outlining of three conceptual frameworks for environmental racism. The three principles, applied to the problematic emphasis on the linkage between lead paint and the risky behavior associated primarily with the black community, call attention to Maryland’s problematic decision-making processes where legally sanctioned welfare compensation for lead poisoning victims does nothing to actually solve the racially discriminatory housing practices that have historically and institutionally been in place.

Clearly, there must be a more meaningful attempt to critically analyze the assumptions surrounding the discourse of lead pollutants in Baltimore City; the

environmental justice lens has the power to deconstruct these underlying presumptions through highlighting the normative patterns that perpetuate social injustice. With this framework of analysis, there is hope that the discourse on lead paint levels in Baltimore will invite different perspectives – landlords, mental health professionals, victims of lead toxicity, and government officials – to work together for more effective solutions to combat this environmental health issue, and ultimately upend deeper systems of structural injustice.

### **Background on Toxic Lead Poisoning**

According to the Agency for Toxic Substances and Disease Registry (ATSDR), lead is a “heavy, low melting, bluish-gray metal that occurs naturally in the Earth's crust...[but] is rarely found naturally as a metal” (2015). The ability for lead to easily form a compound makes the metal extremely resistant to corrosion, and therefore allows its particles to travel long distances before settlement, firmly affix onto different types of surfaces, and accumulate in large concentrations. Such resilience makes lead an ideal compound for use in many products requiring durability; the amount of lead has skyrocketed in the past fifty years due to its abundant prevalence in the environment. This is a direct result of human activity, including mining, incinerating waste, and manufacturing, as well as of use in commonplace products including vehicles, gasoline, pesticides, paints, dyes, caulk, ammunition, batteries, and pipes. Since the Environmental Protection Agency (EPA) prohibited incorporating lead in gasoline in the mid-1990s, the occurrence of lead in the environment has significantly declined; however, due to the fact

that “elemental lead cannot be broken down,” it is unlikely that lead can be significantly eliminated from the environment (ATSDR, 2015).

That lead can never be fully eradicated is alarming, considering that quite a number of studies on the effects of lead on humans have consistently shown disquieting findings. The EPA, the Department of Health and Human Services (DHHC), and the International Agency for Research on Cancer (IARC) have concluded that inorganic lead is reasonably accepted to be carcinogenic, or contributing to an onset of cancer. And though cancer may only occur in extreme cases, lead compounds have the capacity to affect almost all organ systems in the human body. Specifically, the most commonly seen effects of lead in the human body tend to be a decline in the functions of the nervous system, a weakening of muscles, and slight changes in blood pressure; more serious possible effects include severe damage to the functions of kidneys and the brain, miscarriages in pregnant women, and changes in sperm production for men (ASTDR, 2015).

Due to these and many more damaging effects of lead, researchers have determined that no safe blood lead levels exist, especially for children. The CDC has recently updated their threshold levels for amounts of lead in blood for children only after substantial amounts of research argued for heightened precautions; the current threshold for blood lead levels deemed “safe” is at 5  $\mu\text{g}/\text{dL}$ , whereas before 2012, the threshold was double that, at 10  $\mu\text{g}/\text{dL}$ . Children harbor especially heightened vulnerability, as they generally “absorb about 50% of ingested lead” (ATSDR, 2015) into their bloodstreams, a higher proportion than adults do. This is coupled with the concern that they also carry a much higher risk of exposure. Children can be exposed to more lead throughout their

lifespan: exposure can start from an affected mother's womb, to continue by swallowing different organic and inorganic foods and items as an infant. There is significant attention paid to the possibility of children eating paint chips due to their sweet taste; consuming paint is taken seriously by the ATSDR because it can "contain very large amounts of lead," "particularly in and around older houses that were painted with lead-based paint" (ATSDR, 2015). For both children and adults, lead usually enters the body through eating, drinking, or breathing the chemical. People who are at highest risk are those who live in close proximity to hazardous waste sites or highways, those who drink tap water in homes containing lead pipes, and those who live in older houses containing lead paint. Again, among these groups children hold even higher risk and face even more harmful consequences, including mental and physical dysfunction, due to their bodies still undergoing developmental processes (ATSDR, 2015).

### **The History of Lead Paint in Baltimore**

Many of these dangers of the toxicity of lead were well known even as early as the late 1800s. By the 1920s and 1930s, prominent countries in Western and Eastern Europe had implemented restrictions on incorporating lead in paint, and there were even suggestions from the League of Nations for a complete ban of lead-based paint in 1922 (Markowitz & Rosner, 2000). However, due to the effective malleability and resilience of the chemical, the United States ultimately rejected these projects, and continued to use the chemical in many everyday materials such as gasoline, cans, and especially paint (ASTDR, 2015).

To the heavily industrializing U.S., lead was much too beneficial a chemical to abandon. The Industrial Ages of the 19th and 20th centuries brought rapid expansion and growth to cities across the United States, specifically to those in the American Midwest and Northeast, in the region now known as the Rust Belt. Baltimore City, bordered by the historic Inner Harbor of the state of Maryland, is one of such Rust Belt towns all characterized by having faced a decline in economy, population, and power in the post-industrial era (McCoy, 2015b). According to Antero Pietila (2010), a prominent author and former long-time journalist for the leading city newspaper Baltimore Sun, Baltimore City had been a hub for the steel industry, garnering great wealth from its steel plants during the first half of the 1900s and especially through World War II; this consequently attracted a large population of workers, including many African-Americans escaping from unemployment and hostility in the rural South during the Great Migration (p. 78). This then called for an immediate and huge demand for new residences and resulted in a rapid development of housing and urbanization through racially segregated housing programs (pp. 83-84); it was later reported that at least 45,000 of these homes were determined to be substandard quality, with a majority being part of the housing units for the black population (pp. 97-98). Whether rated substandard or not, it was likely that lead paint was used for the walls of almost all of these buildings with “leaded paint [being] dominant” at the time (Barry-Jester, 2015), despite existing research on the health hazards of lead exposure. Paint companies were determined to sell lead-based paints to the public, and successfully did so throughout the early and mid-20th century by wholly rejecting scientific evidence and starting rigorous advertising campaigns that marketed to

American households, especially to those with children, the most vulnerable (Markowitz & Rosner, 2000).

It was not until 1978 that the use of lead paint was finally banned in the construction of homes, and the government laid out regulations for safe threshold levels of exposure (Barry-Jester, 2015). By then, however, due to white flight to the outlying suburban areas – as whites were not longer able avoid racial integration with African-American residents with the prohibition of redlining – and other economic factors that contributed to an increasingly troublesome population decline in the city, African-Americans now made up 54% of the city's population, when they had been at just 24% thirty years prior (Bouie, 2015), and were moving into homes that had been rapidly built with lead paint in Industrial-era Baltimore. In other words, many of the African-Americans who had moved into the neighborhoods that had previously been occupied by white residents who fled to the suburbs were living in industrial-age homes that were caked with lead paint (Pietila, 2010, p. 251). A \$33 billion national abatement project was finally instated in 1990 through the Department of Health and Human Services, though so far, “only a fraction of that has been spent” (Barry-Jester, 2015).

It was also during this decade that scientists from Johns Hopkins University, with support from the EPA, conducted an experiment on lead paint exposure, in which they invited households with young children “to participate in a research study comparing how well different home renovations protected children from lead poisoning” (Epstein, 2013). However, these scientists were actually in collaboration with slum landlords whose houses were known to have extremely toxic levels of lead paint, and they had encouraged these landlords to especially target mothers with infants and toddlers so as to focus their

research on the age group most developmentally vulnerable to lead exposure. To the unaware participants, these scientists offered lead removal and periodic blood level checkups to allegedly determine if these abatement projects would be successful. However, there were three levels of this lead removal initiative, of which the scientists were well aware that levels I and II were insufficient to protect from poisoning, as well as a control group, in which the homes received absolutely no support for removal (Epstein, 2013). Needless to say, this was an appalling experiment that violated ethical grounds with its negligence in fully disclosing information to participants and exposing participants to high amounts of risk to physical and cognitive health. More than two decades later, in 2011, parents who had unknowingly participated in the study successfully filed a lawsuit against the Kennedy Krieger Institute, the medical research center affiliated with Johns Hopkins University, for endangering “more than 100 children... despite assurances from the... Institute that the houses were ‘lead safe’” (Williams, 2011).

Since this case, efforts toward actual lead abatement and sufficient medical treatment are still lacking in power and effectiveness. Two years after the lawsuit was filed, “Congress slashed funding for lead abatement from \$23 million to \$2 million before restoring it to \$15 million in 2014,” despite that amount only being enough for all of Baltimore City (Barry-Jester, 2015). Studies have shown that Baltimore still “has nearly three times the national rate of lead poisoning among children, and investigating the data reveals that, like other health disparities, “just a handful of neighborhoods are responsible for almost all of the city’s cases over the last five years” (Barry-Jester, 2015). The fact remains that almost all of these neighborhoods are majority black residents

(Mellnik & Lu, 2015; Yeip, 2015). It is therefore clearly evident that levels of risk in exposure to the toxin are not the same across all communities nor equally abated among the neighborhoods of Baltimore.

### **Findings on Lead Poisoning in Baltimore Children in a Racial Context**

It seems inevitable, then, that exposure to lead paint would fall along racial lines with the historical precedence of de jure and de facto racial segregation in the United States. Indeed, there has been great decline in cases of lead blood poisoning since the 1970s and 1980s, most likely due to the lead paint ban in 1978, and the official eradication of lead from gasoline for automobiles in 1985 (Epstein, 2013). A CDC (2009) report from 2004 shows that “nationally, [blood lead levels] in children have been declining,” as the total prevalence of elevated blood lead levels (with the threshold at  $\geq 10$   $\mu\text{g}/\text{dL}$ ) have shown a decline of 84% since the 1980s (p. 2). The prevalence of lead-based paint in homes, however, do not appear to have met as significant a decline; the American Healthy Homes Survey reported that housing units with lead paint showed a decrease from 40% of all 106 million homes in 1999, to 35% of all 96 million homes in 2006 (HUD, 2011, p. ES-1). That lead abatement projects of the mid-20th century have failed to serve all households equally seems to have only further exacerbated the gap between the level of exposure for African-American communities and the lower class, and that of whites and the upper class. Current statistics based on racial categories from various sources prove the continuing influence of past racist policies and racialized historical patterns of the United States. HUD (2011) presents reports that “poorer households have significantly more [lead-based paint] (40%) than more affluent households (32.3%), as do...African Americans (45.3%) and Other Race (49.3%)

households compared to White households (31.6%)” (p. ES-1). CDC (2009) concludes broadly: “Children at highest risk are non-Hispanic black, live in housing built before 1950, and their families are poor” (p. 2).

According to Maryland’s Childhood Blood Lead Surveillance Annual Report (2014), in the case of Baltimore City, 32.1% of the children whose blood lead levels were tested in 2013 had some level of lead in their system, though slightly down from the year prior, when 33% of the children tested had blood lead levels (p. 4). However, the fact remains that the city stands out from its surrounding counties with “the highest testing rates for children 0-72 months” at 32.1% (p. 3). In addition, only 157 of the 218 children with blood lead levels of or over 10 µg/dL received treatment in 2013 (p. 4), where it would be crucial that all children with such high toxic lead levels should receive immediate care. Not only is there a lack of foresight within the state government to address the needs of its citizens in the city, but there were also shortcomings in the state’s research of this case. The Maryland report only required testing for citizens who fit into certain criteria, including residence in an “at risk” area and use of the state Medicaid program (Maryland Dept. of Env., 2014, p. 2). This fundamentally indicates that the findings come short in representing a full and accurate picture of the geographic patterns of lead poisoning within the state. The incompleteness of the empirical data is also reflected in the report’s failure to account for demographic categories, including the most crucial and pertinent, race and household income. Such fragmentary methods of research only further demonstrate the state’s alarming lack of interest and urgency in understanding the grave problems of its constituents, where a focused and critical analysis of lead exposure along racial lines is vital – especially when considering the

population (in this case, as well as in almost all other environmental justice cases, the predominantly African-American, poor population) that is burdened with the heaviest impact from decisions made by government officials and health experts.

### **Accusations Against Victims of Lead Paint Exposure**

There has been a long history of lead industries avoiding the issue of the toxicity of lead by blaming the residents themselves of homes that contained lead paint. According to David Rosner and Gerald Markowitz (2013), both professors of history at Columbia University and CUNY respectively, in some of the formerly industrial cities including Baltimore, the lead industry immediately fought any attempts by the government to instate lead regulations in the mid-1900s by “[seeking] to place the blame for [the] lead poisoning epidemic on parents and children, [and] claiming that the problem was not with the lead paint but with the ‘uneducable Negro and Puerto Rican’ parents who ‘failed’ to stop children from placing their fingers and toys in their mouths.” The industry also suggested that poisoned children were allegedly riddled by a different illness that caused them to somehow put “‘unnatural objects’” in their mouths (Rosner & Markowitz, 2013). This condemnation of consumer choices and actions wholly contradicts the duty of the state and large organizations to ensure the safety, health, and well-being of common citizens. Furthermore, such claims harbor utterly racist thought that only serves to perpetuate structural systems that keep people of color marginalized in the greater society.

Unfortunately, such accusations are not simply racist claims of the past. In fact, there have been some suggestions quite recently from government officials to reconsider the state laws that prevent further exposure to lead. According to The Baltimore Sun,

Maryland's chief housing official under Governor Larry Hogan, Kenneth C. Holt, proposed a loosening of landlord liability in cases of lead paint in homes, due to an alleged possibility that household lead paint abatement initiatives could provoke mothers to deliberately poison children in order to receive free housing. Holt cited a housing developer, who had mentioned that "a mother could just put a lead fishing weight in her child's mouth, then take the child in for testing and a landlord would be liable for providing the child with housing until the age of 18" (Dresser & Wheeler, 2015), but later admitted that this was simply an anecdotal possibility, and he had no empirical evidence of an actual occurrence. Holt's proposal naturally incensed community members and health professionals who were well aware of the health hazards of lead. His claim surprised even other government officials, who stated they had never heard of or considered such a possibility, and baffled advocates of lead abatement, who pointed out that nowhere does the law state that landlords are obliged to provide housing until dependents in the household become of legal age (Dresser & Wheeler, 2015).

As reflected in the outrage from the community, there are extremely alarming and blatant implications in such a proposal. Holt's claim, whether based on actual instances of deliberate poisoning or not, vastly affects certain populations that are vulnerable to lead paint exposure. According to William K. Black, author and professor at the University of Missouri in Kansas City, those most affected by lead paint poisoning are naturally of lower class, and are disproportionately African-American (Ball, 2015). This implicit blame on parenting of people within this demographic – namely, African-American mothers in Baltimore City – is just one of the many generalizing, negative claims made about a population's lifestyle choices. This grossly misguided condemnation

of certain lifestyles expresses an astounding level of disrespect for motherhood in the poor and black communities in Baltimore, and also fails to unearth all of the structural systems that heavily influence the issue of lead paint poisoning in the inner-city areas – ultimately becoming rhetoric used by the state and the elite to attempt to relieve themselves of any responsibility in attending to the needs of the state’s most vulnerable populations. In fact, this accusation and suggestion come in a situation where there are still over 50,000 Baltimore residents who show high blood lead levels, and there is still much needed to be done for abatement and genuine reversal of lead paint instances (Ball, 2015). Under the environmental justice lens, this unjust accusation against the already underprivileged populations exposes the utter lack of care from city and state officials for the well-being of their citizens.

### **Framing the Issue as a Result of Unfavorable Behavioral Choices**

Interestingly, most of the rhetoric in recent studies surrounding the issue of lead paint takes a different approach that arrives at the same result. Rick Nevin, an economist and consultant who has served as an advisor for the United States Department of Housing and Urban Development, stirred vibrant conversation among academics and in mass media with his study on the link between lead exposure and violent, irrationalized behavior. Among the many reports he has published on neurological effects, his central contention is that there is a strong correlation between blood lead levels and trends in social and cognitive measurements of IQ, mental retardation, violent crime, unwed pregnancies, and overall impulsive behaviors (Nevin, 2000; Carpenter & Nevin, 2010). Nevin himself does not conduct clinical studies on the biological effects of lead poisoning, but rather incorporates results from these studies into his own empirical

analysis of the correlational data between fluctuations in blood lead levels among children and measures of academic achievement, statistics on rape, or teenage pregnancy rates (Nevin, 2000). In regard to social causes, he does address how “there is also a potential interaction between environmental exposures affecting neurodevelopment and social factors” (Carpenter & Nevin, 2010, p. 265) and that “there has been some success with...programs” of behavioral and psychological therapy (Carpenter & Nevin, 2010, p. 261). However, he contends that “success in preventing future violent behavior at later ages has been very limited,” and this is due to the main cause of violent behavior being traceable to the fact that “exposure to lead results in a further lowering of intelligence” (Carpenter & Nevin, 2010, p. 261).

Subsequent studies showing similar trends have followed Nevin’s findings. Such include Jessica Wolpaw Reyes’ analysis of the significant correlation between lead exposure and behavior. Reyes, of Amherst College, uses her findings to prove that “changes in childhood lead exposure are responsible for a 56% drop in violent crime in the 1990s” (Reyes, 2007, p. 1). Her conclusions are based on economic formulae and concepts used to predict correlations between children’s exposure to lead and social ills, which are then tested against empirical evidence of blood lead levels, levels of leaded gasoline, and crime rates (Reyes, 2007). Accepting these findings unconditionally, some correspondents for newspapers and science magazines have brought them into conversation with societal occurrences in ways that have been unsettling. One particular article from the Washington Post by Terrence McCoy (2015a) dramatizes Freddie Gray’s childhood and his high exposure to lead paint, then leads into the phenomenon of “lead kids,” as well as Freddie Gray’s underachievement in school, his criminal history, and

his family's involvement with litigation for lead poisoning. McCoy raises points that would naturally arise from understanding the nature of studies like Nevin's and Reyes', such as his question of: "Was it the lead poisoning that resigned Gray and his family to a life on the margins? Or would they have ended up there anyway?" He also mentions that "it is...hard to know whether Gray's problems were exclusively borne of lead poisoning or were the result of other socioeconomic factors as well" (McCoy, 2015a). However, McCoy does not probe into what these other "socioeconomic factors" could be, nor does he try to gauge their influence on Gray's life.

It is undoubtedly important to understand the neurological links to lead paint exposure, and how it can significantly pose negative consequences to physical health and mental stability. To not do so would mean that abatement projects and prevention programs would not see immediacy in implementation, and claims about the dangerous toxicity of the chemical would not be taken seriously. However, a more critical look at these unchallenged links between lead blood levels and behavioral problems reveal some serious potential of further disadvantaging the populations already most affected by lead exposure. By reducing the issue to simply environmental causes, these writers fail to address the sociological systems that geographically determine the varying levels of vulnerability to the toxin, and consequently they absolve authorities and the state from taking responsibility to care for their most marginalized citizens – namely, the poor and black African-Americans of inner-city Baltimore. It could be argued that the conventions of academia perhaps veered these scholars away from addressing social contexts in their scientific research articles; however, as a result of the public recognition of these findings, and the many other similar studies that followed, it was imperative that the

researchers and the opinionated masses to contextualize such significant information in the social reality of the experiences of people who have high risk of exposure to the toxin. For the fact remains that despite all of these studies, neither these researchers nor government officials have come forward to propose an actual, viable resolution or plan to eradicate lead paint from the industrial homes that the most marginalized citizens of Baltimore City inhabit (Ball, 2015). It is evident, then, that the research fails to even inspire action for the eradication of such a toxic chemical from homes, much less address the role of institutional forces that perpetuate these environmental hazards.

### **The Many Layers of Environmental Injustice**

Like most environmental issues, the matter of disproportionate lead paint exposure among Baltimore City residents is multiplex and intricate in nature. There is thus a call for a grounded framework to deconstruct the many components of the problem and the relationships between different actors that impact the issue. The environmental justice framework is ideal in that the environmental justice movement is centered on and “located in low-income and working-class communities in and around industrialized urban centers” (Di Chiro, 1996, p. 301), and predominantly bred by communities of color (Di Chiro, 1996, p. 303). Giovanna Di Chiro (1996), a scholar in environmental studies, calls attention to the differences between mainstream environmentalism and the environmental justice framework, as the latter considers the environment to be “the place you work, the place you live, the place you play” (p. 301). This outlook can easily apply to the fact that poor African-Americans continue to face disproportionately higher levels of exposure in the buildings in which they live, play, and work, in comparison to whites, as a result of the historic and societal institutionalized paradigms that manifested

before, during, and after the industrial period in the United States. That the most marginalized communities of the city face the most vulnerability and receive the least support for home and health interventions also speaks to the expansive gap in power between figures of authority and governmental bodies, and the poor and black.

The relevance of the environmental justice perspective in the Kennedy Krieger Institute lawsuit and the Baltimore officials' accusations against poor, black mothers is even clearer. In the former case, African-American children and mothers were unknowingly targeted to be exposed to high and dangerous levels of lead paint, as part of a broader research experiment on the effectiveness of lead abatement programs. In other words, the Kennedy Krieger Institute financially encouraged unaware black residents to live in homes that the institute was certain would elicit dangerous health risks – especially to children, the most vulnerable. To compound this atrocity, the health institute did not support these misinformed participants with treatment for the symptoms that came with high levels of lead exposure and high blood lead levels (Williams, 2011). There is no doubt that this case presents a clear injustice in any sphere; it is strikingly relevant to the thirteenth principle of environmental justice as put forth by the First National People of Color Environmental Leadership Summit, which states: “Environmental Justice calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color” (FNPCELS, 1991). However, despite the Leadership Summit's demands, powerful institutions like the Kennedy Krieger Institute have continued to carry out harmful practices on people of color, presenting a deep disparity in the power of self-determination based on racial lines. Discriminatory cases such as this

one underscore further need for the environmental justice framework and movement to enter the discourse surrounding any environmental issue.

The latter case, regarding Kenneth Holt's unsubstantiated accusations against vulnerable mothers, touches on even more components of the environmental justice framework. There is first the risky practice of solely blaming lifestyle choices of environmental injustice victims – whether correct or incorrect – without any acknowledgement of the environmental location, the environmental hazards and risks surrounding the victims, or the underlying social fabric that contributes to these factors. Luke Cole and Sheila Foster, environmental lawyers and experts in environmental justice, present the concept of environmental racism and how it works to create unequal distributions of environmental hazards along racial lines in both overt and latent ways (Cole & Foster, 2000). They pose that those who dispute instances of environmental racism retort that racial patterns present a correlation, not a causation, and attempt to offer “alternative explanations...to explain racial disparities,” of which one is “the ‘lifestyle’ explanation” that describes “social situation or status as the causal element explaining the distribution of hazardous wastes and other toxics” (Cole & Foster, 2000, p. 58). The problematic of this explanation comes from it “allow[ing] the observer to acknowledge the unequal environmental protection of certain groups, and, at the same time, to keep a safe distance from the social context and structural dynamics that produce those outcomes” (Cole & Foster, 2000, p. 60). Isolating themselves from the greater duty to attend to the physical and social conditions of their citizens is precisely what lead paint industries and Kenneth Holt have done in the case of lead poisoning; this blindness

toward the consequences of their own apathy illustrate the structural deficiencies in the power and level of addressing need in the city and the state.

There is also a gendered component that governs Holt's claims against mothers specifically. According to Rachel Stein (2004), a director of women's studies at Siena College, women make up the core of environmental justice activism, for good reason: "environmental ills strike *home* for vulnerable communities, and...women have often been responsible for that domain" (p. 2). In other words, gender roles necessitate women being directly involved in taking care of the environment in which they and others work, live, and play. However, the repercussions of these gender roles are also that women become targets of blame for any negative effects connected to the concept of home. A gendered analysis with the environmental justice perspective, then, unmask these accusations to reveal the underlying workings of gendered roles and sexual oppression, which are bound to some of the same societal structures that perpetuate injustices related to other classifications of race and class. This accusation of citizen choice through focusing only on the role of the mother in the domain of "home" becomes a disingenuous way for governmental officials like Holt to isolate state responsibility to take care of its citizens from the trends in lead paint poisoning.

A critical analysis through an environmental justice lens of the seemingly beneficial studies on the neurological effects of lead exposure also reveals some telling and unexpected implications. Cole and Foster (2000), in explaining the struggles of environmental justice, point out three key concepts of environmental racism that must be dissected: "(1) retain[ing] a structural view of economic and social forces as they influence discriminatory outcomes, (2) isolat[ing] the dynamics within environmental

decision-making processes which contribute to such outcomes, and (3) normatively evaluat[ing] social forces and environmental decision-making processes which contribute to disparities in environmental hazard distribution” (p. 65). The scholarly and media articles on the social outcomes of lead poisoning do not incorporate any of these approaches. Instead, the heavy emphasis on the linkages between the prevalence of lead, its negative and dangerous neurological effects, and the high incidence of poverty and crime in certain communities creates an isolation, distancing the social institutions from the social ills. When these analysts and experts present grounded scientific evidence to staunchly reiterate the role of lead paint in the societal problems without considering the forces of society and economy, it allows for others to jump to conclusions about Baltimore City’s ills and strategically avoid critique of the institutional role in perpetuating the injustices affecting an already marginalized population.

Furthermore, the reports from these economic experts and the major failings of the governmental abatement projects also exemplify the workings of white privilege. Laura Pulido specifies white privilege as “a form of racism that both underlies and is distinct from institutional and overt racism” (p. 15) and is “an attempt to name a social system that works to the benefit of the whites” (p. 13). It is not simply a matter of statistics or correlation that African-Americans are disproportionately exposed to lead exposure, and thus suffer from more lead poisoning than whites; it is a case of the larger social structure that pervades all networks across the nation, though especially those in very racially disparate cities like Baltimore. By reducing the discourse of lead poisoning to focus principally on the scientific evidence behind its neurological effects but failing to contribute to any systemic change to combat the issue, the city and state governments

sustain the continued marginalization of black bodies. Understanding white privilege, then, provides a critical view of Nevin's and Reyes' emphases on scientific correlation that cleverly deflects the reality that social and institutional factors could also be significant causes, and conveniently absolves the white elite from holding any responsibility – as it plays out in the failure to realize substantial declines in cases of lead poisoning among African-Americans.

Clearly, neglecting the deeply embedded social structural systems based on race and class, and simply looking at direct or topical solutions can only result in a gaping hole between the proposed intervention and actual outcomes. The environmental justice perspective provides a comprehensive analysis of structurally unjust systems that are also deeply embedded in these connected issues of lead paint exposure, lead poisoning, poverty, and mental stability. As a result, the framework invites intersectionality, which is unquestionably crucial to moving forward toward workable resolutions and collective action. There is therefore much potential for the environmental justice framework to fundamentally change the way the many actors relate and react to the issue, and foster a more effective solution to the problem of lead paint heavily affecting marginalized populations in the city of Baltimore.

### **Conclusion**

When speaking of the problematic levels of lead paint exposure in Baltimore City, it is absolutely essential to utilize the environmental justice framework to critically analyze the many layers of the issue; without it, the proposed solutions prove permanently insufficient in its failures to consider the network of social forces that are inherent in the issue of lead poisoning. By drawing on certain approaches of scholars who

demonstrate environmental justice frameworks, this paper exposes the racialized trends in the data and failings in the analyses that emphasize this association of lead with the science of its behavioral effects. Throughout this paper, the environmental justice lens has revealed that the only way to effectively engage in this issue of lead paint exposure in Baltimore is to bring different environmental actors together in compromise and understand the linkages between the myriad social, biological, environmental, racial, and economic factors that imbue the issue. Intersectionality, then, is central in asking critical questions: Would Freddie Gray have not been killed had he been identified solely as an individual with mental disabilities? On the other hand, what are the consequences of immediately categorizing all those affected by high blood lead levels as having cognitive and behavioral disabilities? How can Baltimore uproot highly dangerous lead levels and racially influenced social problems (of poverty, crime, disinvestment, etc.) simultaneously? If the city is to enact the changes necessary to prevent further avoidable, but devastating, tragedies from happening, it must determine such changes through a comprehensive, structural, and integrated framework, such as that of environmental justice. Until then, true justice, environmental, social, or otherwise, cannot be served.

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