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## DIRTY LAUNDRY: THE TOXIC HERITAGE OF DRY CLEANING IN INDIANAPOLIS, INDIANA

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### Introduction

In September 2012, the Environmental Protection Agency (EPA) began remediating what was known as “The Tuchman Cleaners Site” in Indianapolis, Indiana (USA).<sup>1</sup> The process involved excavating ruptured underground storage tanks and removing contaminated soil, assessing and mitigating vapor intrusion in the surrounding residential neighborhood, and transporting and disposing excavated hazardous materials to an “off-site” location. (EPA Tuchman Site Profile n.d.). As the EPA report states, this dry cleaning contamination site is in a mixed commercial and residential area with approximately 10,000 people living within a mile. It is also less than a quarter mile (0.4 km) from a well field that supplies drinking water for the city and approximately 500 feet from Fall Creek, a tributary of the White River that flows through central Indianapolis. The Tuchman plant serviced most of its retail stores throughout the city from 1952 to 2008 when its parent company declared bankruptcy. IDEM, the state environmental agency, had noted contamination on the site during inspections in 1989, 1993, 2002, and as early as 1994 identified contamination in a nearby aquifer. In 2011 at the request of the state (Groves 2011), the EPA got involved and the Tuchman site became one of the US’s largest EPA Superfund<sup>2</sup> sites associated with dry cleaning contamination (Figure 13.1). Yet, based on conversations with residents of the city and on official and public discourses, few people in Indianapolis are aware of it.

Unlike highly visible sites such as mines, major industrial plants, and sprawling dumps, dry cleaning contributes to the pervasive but largely invisible toxicity that characterizes modern cities. As sociologists Scott Frickel and James R. Elliott have argued, itinerant, small-scale, and largely unregulated and undocumented enterprises have left a legacy of accumulated environmental hazards across American



**FIGURE 13.1** Underground storage tanks being excavated by the EPA in 2012 in the first phase of mitigation at the Tuchman Cleaners site, Indianapolis, IN (Photo: Environmental Protection Agency).

cities (Frickel and Elliott 2018). Unlike operations confined to industrial areas, dry cleaners (along with gas stations) are distributed throughout cities and often even integrated within residential areas. Due to their neighborhood locations, dry cleaners, particularly wholesale plants, contribute to negative health impacts in urban environments, particularly in marginalized neighborhoods, through fumes, spills, and dumping (Gelobter 1993, 850). Dry cleaners are also part of a pattern of frequent turnover. Frickel and Elliott (2018) argue that cities' accumulated environmental burdens are created by three interrelated processes: industrial churning (frequent relocations and closing of urban industry), residential churning (changing residential patterns and demographics), and risk containment (politically expedient and highly selective governmental management of legacy risks). Significantly for this examination of toxic heritage, Frickel and Elliott contend that one result of this rapid spatial and temporal turnover combined with public policy inattention is a loss of "public memory" and a process of "collective forgetting" (Frickel and Elliott 2018, 6, 84). They argue that the three processes "reinforce the lost knowledge of neighborhood history and legitimize institutional forgetting in ways that perpetuate the accumulation of industrialized urban lands and the hazards they may still contain" (Frickel and Elliott 2018, 7). Humans have long relegated waste to less obtrusive places, whether dumping household trash in pits or siting municipal dumps away from

population centers (Melosi 1973). But the inescapable exposure to modern pollution has often necessitated what Loretta Lou calls the “art of unnoticing” as a coping strategy, such as in Guangzhou, China, where people live in the shadow of petrochemical plants with their attendant risks of pollution and chemical explosions (Lou 2022). Politicized narratives of silence and denial have been documented in situations in which allegiances with or challenges to sources of contamination “operate as strategies of normalization, of exclusion and inclusion” and that resonate at an emotional, as well as symbolic and conceptual level (Hart 2022).

Beyond polluted urban contexts, scholars across biology, environmental science, theology, and psychology have explored the phenomena of environmental or ecological amnesia. The term describes the suppression or absence of knowledge of ways of engaging with the natural world and also a loss of affective connection to the places one inhabits. As Forrest Clingerman argues, “This amnesia is not merely a forgetfulness of how to encounter environments in general; it is equally a loss of home and place” (Clingerman 2018, 186). The idea of environmental amnesia also references the phenomenon that each generation takes their lived experience of the environment to be the norm and that people are habituated to whatever conditions they were born into (Kahn 2002; Buell 2017). But understanding affected communities’ responses to environmental harm and risk requires recognizing that amnesia and habituation are entangled with the power dynamics of economic and political structures that produced the pollution (Cahill and Pain 2019; Chagnon et al. 2022; Lou 2022, Parks 2021; Wateau et al.; Little and Akese in this collection). As the editors of *Arts of Living on a Damaged Planet* state, people face a “barrage of messages asking us to *forget* – that is, to allow a few private owners and public officials with their eyes focused on short-term gains to pretend that environmental devastation does not exist . . . . Our era of human destruction has trained our eyes only on the immediate promises of power and profits. This refusal of the past, and even the present, will condemn us to continue fouling our own nests” (Gan et al. 2017, G1–2). A reckoning with toxic heritage requires recognizing, therefore, that habituated or suppressed awareness of toxicity is integral to extractivist processes in which resources (minerals, human labor, water, soil, air) are consumed and/or contaminated in the pursuit of profit, while the ongoing costs of despoiled communities, negative health impacts, and mitigation are borne by those who inherit the pollution. An extractivist framework acknowledges, as Justin Parks has argued, that this is not simply an industrial practice of “large-scale, profit-driven operations for the removal and processing of natural resources such as hydrocarbons, minerals, lumber, and other materials,” but it is also the habitus of modern society “in which our agency as subjects is thoroughly energy-dependent, underwritten by narratives of abundant resources available for the taking” (Parks 2021, 353).

For many Indianapolis residents, environmental contamination – dry cleaning, air pollution, lead in their soil and water, *E. coli* in the public waterways, and a host of other issues – is neither a conscious concern nor a common topic of public conversation. This chapter explores narratives of the social and environmental history

of dry cleaning in Indianapolis as a lens into the ways in which toxic heritage, much like the dry-cleaning chemical contamination itself, has been channeled in hidden discourses and archives. While it has largely disappeared from public memory, it circulates nonetheless, and it can be activated with intentional curation. Specifically, the study highlights the tensions between, on the one hand, the amnesia and habituation of accumulated environmental harm and, on the other, the narratives of pollution as a central heritage of modern human history. Indianapolis offers examples of how mobilizing toxic heritage storytelling can engage people in public conversation, make connections across communities, and amplify residents' long-standing activism and advocacy. The city's legacy of "dirty laundry" demonstrates the power of participatory heritage not only to reflect but to shape understandings of the relationship between past and present in a time of ecological and climate crises.

### A Brief History of Dry Cleaning

While the techniques have changed over time, people have cleaned textiles without water since Romans used ammonia (derived from urine) to clean wool without shrinking it (Bradley 2002), and laundries applied clay to leather gloves in order to remove oils (*Greenfield Evening Republican*, 1 January 1895, 3). In the United States in 1821, a patent was granted to Thomas L. Jennings, the first African-American patent-holder, for a process he called "dry scouring" (Bellis 2021). In France, industrialist Jean Baptiste Jolly developed a similar method using petroleum-based solvents such as kerosene and gasoline in the mid-19th century. This appears to have been at least one source for the adoption of the process in Indianapolis, as evidenced by an 1880 advertisement for Walker Chemical Dye Works offering dry cleaning "by the new French process" (*Indianapolis Leader*, Oct. 2, 1880). Products were also available for in-home dry cleaning. An 1895 Indiana newspaper advised, "If the article to be cleaned cannot be put in water, it is dipped in a vat of benzine" (*Greenfield Evening Republican*, Jan. 1, 1895), and a 1947 ad for Renuzit stated "All you do is dip and rinse. So easy a child can do it!" (*Indianapolis Times*, April 24, 1947).

With the growth of commercial laundries in the early 20th century (Mohun 1999) and the development of the synthetic chemical industry following World War I, the technology for dry cleaning became more complex. Sophisticated equipment and the introduction in the 1930s of perchloroethylene or tetrachloroethylene, a chlorinated solvent commonly known as PERC, enhanced dry cleaning's popularity (Doherty 2000, 70). Chlorinated solvents were highly effective in removing stains, evaporated more quickly and with less odor, and were less flammable than petroleum distillates. PERC was more expensive than petroleum solvents, however, so it was not until 1962 that chlorinated solvents became more common than petroleum distillates. The problem, however, is that PERC (CTC, PCE, TCE, and TCA) is a reproductive toxicant, neurotoxicant, carcinogen, and persistent environmental pollutant, and it was unregulated until the 1977 Clean Water Act (Ceballos et al. 2021; EPA 2016; CDC 1997; Morrison 2003). By the 1990s some dry cleaners had adopted safer,

more environmentally friendly solvents, and the industry has also seen a significant market share decline over the past 30 years. But PERC is still the most commonly used chemical (Ceballos et al. 2021), and its historical use has left a legacy of slow violence (Nixon 2013, Davies 2022) in the form of contaminated sites, particularly in urban areas.

Dry cleaning is significant for toxic heritage not only because workers are exposed to toxic solutions and fumes, but also because spills, dumping, and leaking underground storage tanks contaminate soils. Prior to 1970s regulations, many plants had drains in the floor so that spills were channeled directly into the ground (Lohman 2002). Contamination creates underground plumes that continue to spread over time through the transfers from a subsurface source zone of residual dense nonaqueous phase liquid (DNAPL) to flowing groundwater (Frind 1999). These spreading underground plumes of chemical contamination contaminate groundwater, but can also enter open waterways posing a direct risk to ecosystems. Significantly for health risks, the vapors can seep upward from volatile sub-surface plumes and enter basements and crawl spaces. If not ventilated, the invisible and largely odorless gas can become concentrated and pose a health risk. The EPA's cleanup proposal for the Tuchman site noted, "Exposure to very high levels of TCE or PCE can cause dizziness, headaches, sleepiness, imbalance, confusion, nausea, unconsciousness, and even death" (EPA 2020). The odorless gas and its underground spread mean that dry cleaning's environmental harms, as well as their health risks, are largely invisible.

### Narratives of Dry-Cleaning Heritage in Indianapolis

Environmental amnesia and the invisibility of urban industrial contamination offer productive starting places for considering Indianapolis' dry-cleaning heritage, particularly the way its narratives intersect with public memory. As Samuels (2015) has argued, heritage rhetoric, including text and images, mobilizes and motivates as it is used to persuade and codify. As such, heritage rhetoric is a social practice and a dynamic part of creating social change. In this light, Indianapolis' dry-cleaning heritage narratives are a lens into the fields of power that produced, perpetuate, and navigate urban pollution. These narratives circulate in discrete discourses that may be characterized by their authorship: industry-produced, dry cleaning workers, environmental regulatory and advocacy organizations, cultural heritage institutions, and activist voices including public history, journalism, community members, and participatory heritage. Each offers insights into the meaning and the politics of dry cleaning heritage as they intersect with the history of the industry's environmental harms.

Industry-produced narratives reveal both consumer-focused messages and the contours of social inequalities and segmentation. Specifically, Indianapolis dry cleaners operated in a highly racialized landscape that shaped the city's social fabric for much of the 20th century, and, many would argue, continues to be a significant force in the city.<sup>3</sup> For example, a 1938 story in the city's Black newspaper *The*

*Indianapolis Recorder* reported the opening of a United Laundries store at Lockefield Gardens, the new public housing project along Indiana Avenue, a center of African-American cultural life in the city. The story notes, “Having perfected a new system of dry cleaning, the company offers a non-odor method to its customers that is taking the city by leaps and bounds.” It also reports that “Believing in equal representation of all groups, the United Laundries, Inc., operators of fourteen retail stores, employs more than 40 per cent of our group in their plants” (*Indianapolis Recorder* 1938).<sup>4</sup>

The racialized customer base and workforce are evident in other records as well. *The Fiery Cross* newspaper published by the white supremacist Klu Klux Klan, which was a powerful political and social force in Indiana through much of the first half of the 20th century, included dry-cleaning advertisements that subtly coded their affiliations by using the KKK initials, such as in the Arcade Garment Cleaners’ promise of being Kareful, Klothes, Kleaners (Figure 13.2). Business Directory records



FIGURE 13.2 Arcade Garment Cleaners advertisement in *The Fiery Cross*, May 2, 1924.

document the location of cleaners and laundries which were dispersed across the city but concentrated along commercial thoroughfares. Many were in HOLC “Redlining” maps’ red (D) and yellow (C) areas which represented classifications of higher risk and therefore excluded from mortgage lending based on racial criteria (Figure 13.3).



**FIGURE 13.3** Distribution of Indianapolis dry cleaning facilities in 1940 overlaid on the Home Owners Loan Corporation (HOLC) Risk Assessment Categories map. (Map by Owen Dwyer).

Dry cleaning advertisements promoted a service that entails caring for clothing, one of the more intimate forms of material culture, and it was presented not only as convenient but an essential service for the “modern consumer.” The persuasive language used in these ads reflects ideas about race and laundry in ways that elided racial superiority and white supremacy with notions of health and cleanliness. As with the broader commercial laundry industry (Mohun 1999; DeArmond 1950), dry cleaning was associated with modernity, professionalism (and the subtext of socio-economic status), progress, and the health benefits that an allegedly more sanitary process afforded. The central metaphor of commercial laundries and dry cleaning of “clean and white” taps into, as Carl Zimring (2015) has established, an essentialized racial metaphor of American culture and is critical to the construction of white identity and white supremacy. For example, industry-produced rhetoric such as a Swiss Cleaner’s 1920 advertisement extolled the cleanliness and sanitation standards of their facility and process, stating

In the absolutely fireproof cleaning room (the entire plant is of brick, concrete and steel construction), distilled gasoline is gently flushed through your garments in a clean cascade flow, fed into the cleaning machine from pipes underground. The gasoline is extracted by centrifugal force; no twisting by hand, no wringer to stretch delicate garments out of shape. A steam-heated drying tumbler deodorizes and dries simultaneously. Besides the usual pressing machines, special irons for velvets and puff-irons for puffs, ruffles, etc., insure correct and finished work. A corps of expert needlewomen attend to repairs. Four large, clean autos call for your garments and deliver them in sanitary, wardrobe bags (*Indianapolis News*, August 24, 1920).

The architecture of dry-cleaning establishments similarly reflected this metaphor of modernity and cleanliness, particularly when viewed across Indianapolis’ racialized landscape. In communities of color, the cleaners were typically in modest brick and cinderblock structures or adapted residential dwellings as with Baird Cleaners on West Street (Figure 13.4). Larger businesses, which often had multiple locations, invested in storefront facades that conveyed their modern approach to clothing care such as Progress Laundry’s streamlined art deco architectural motifs (Figure 13.5).

These storefronts belied the dangers of exposure for workers and nearby residents to chemical contamination and airborne pollution, as well as the risk of frequent fires inherent in volatile chemical processes. These risks highlight the complexities of workers’ experiences and the ways dry cleaning worker narratives have circulated in “hidden archives,” much as Lisbeth Haas (2014) has argued that “Indigenous archives” preserve Native Californian stories and memories outside of official archives and public memory. The heritage of dry cleaning has been similarly preserved in the traditions, craft, and knowledge of the industry’s workers as well as in the biological legacy borne by their bodies. Interviews with dry-cleaning workers and owners indicated that there are rich memories and deep knowledge of the complex industry,





**FIGURE 13.4** Baird Cleaners, 628 West Street, Indianapolis, c.1975. (Indiana Landmarks).

as well as a candid understanding of both the personal and environmental risks involved. Dry-cleaning workers, both retired and currently working, spoke with pride about the knowledge required to clean stains on different fabrics and the skills to provide a perfect finish to the garment. They spoke of masters of their craft, including one described as a “dry-cleaning magician” who knew all the old formulas and another who was a “master spotter.” At the same time, the workers were aware of the risks and spoke about the changing awareness of the hazards of the industry over time. They knew who ran a “clean shop” and who cut corners by improperly disposing of dirty fluid even after the industry became more strictly regulated. This varying compliance was confirmed by a conversation with a former environmental inspector who commented that “if you want to find the hot spots at a dry cleaner’s, check outside the back door” and by reports of a lawsuit over environmental cleanup costs with accusations of negligence among members of a family-owned dry-cleaning business.



**FIGURE 13.5** Progress Laundry, Gregg Cleaners, 1936 (Bass Collection, Indiana Historical Society).

There is clear evidence of links between exposure to dry cleaning chemicals and disease among industry workers (Vaughan et al. 1997; Zielhuis, Gijzen, and van der Gulden 1989), and dry cleaning laborers spoke candidly about the risks of working with chemicals, although they said they never talked about it while working. One retired owner commented, “I’m in dry cleaning. I know there are chemicals,” and he described times he was “up to my elbows in PERC.” Another recalled that when trying to fix a malfunctioning machine he had to reach his arm far into the tank. He added, “I looked down and saw my face was inches from the fluid.” While the workers spoke of colleagues who had died of cancer, every person interviewed also brought up the pervasive smoking among dry-cleaning workers, and commented that it would be hard to determine the cause of those illnesses.

In contrast to industry and worker narratives, environmental regulatory and advocacy organizations’ language is dispassionately scientific and largely presentist. Regrettably, Indiana currently ranks 42nd–46th out of 50 for environmental health, eco-friendliness, pollution, and air quality, while it is first for coal ash ponds and sixth for toxic chemical releases (Hopkins 2018). Governmental and environmental advocacy organizations typically focus on current conditions and plans for future mitigation or management. Non-profit organizations, such as Friends of the White

River, Hoosier Environmental Council, and Reconnecting Our Waterways, are strong advocates for legislation, education, and funding to restore and protect the future of Indiana's natural environment. The futurist focus of their narratives includes both the positives if action is taken (eg., people once again swimming in now polluted waters, return of healthy ecosystems in ponds now choked by agricultural runoff) and predictions of the dire consequences if nothing is done. And yet, these regulatory agency and advocacy organization narratives have failed to account for the complexity of pervasive urban pollution and its effects on human and non-human lives (Fiske 2020; Murphy 2017). Their messages are often muted in the methodological imperatives of the scientific process and suppressed by economic and political agendas (Boudia and Jas, eds. 2014; Murphy 2017), culminating in what Fiske has called the "disjunctures between scientific models and the entanglements of toxicants and injustice" (Fiske 2020: 9).

A fourth discourse arena is the city's thriving formal heritage network of museums and cultural organizations. Indianapolis is the 18th largest city in the US by area and 15th by population, and it houses the world's largest children's museum, a historical society founded in 1830, and one of the country's largest statewide historic preservation organizations. As the capital of Indiana, it also hosts the state archives, state library, and state museum. It is notable, therefore, that the work on environmental harm is evident only in a few ephemeral programs, in contrast to the more visible temporary or permanent exhibits. For example, the Indiana State Museum mentions industrial pollution and biodiversity loss briefly in their grade 9–12 online video "Human Impact on the Earth," screened "The Last Glaciers" at their IMAX theater, and hosted a guest lecture on environmental racism at an Underground Railroad site (Clark 2022). The silence of heritage organizations on the topic may be understood as part of a pattern of museal silence described by Mason and Sayner (2019), who enumerated eight types or explanatory factors in museum silences, including gaps in the collection, external pressures, collusion in society's silences, and use of silence as oblique or ambiguous messaging. It is clear that addressing the history of environmental harm is challenging in a state that recently passed legislation to disincentivize transitions to renewable energy and to weaken industrial pollution regulation and wetland protections (Bowman 2022). As an example of the political climate, a few years ago the Indiana State Museum hung a banner about climate change on its building, which is visible from the State Capitol. A state legislator objected to it, and it was removed. Furthermore, when approaching a local museum about the possibility of an exhibit on the state's toxic heritage, the authors were referred to the biology curator in the natural history division. Environmental issues were seen as part of the scientific discourse, rather than a social history topic, let alone an important part of the "Hoosier story." The museums' silence may be explained, therefore, by a combination of external pressures, complicity in society's silences, and a disjuncture in thinking about "environment" as a scientific rather than social history topic.

### Activist Voices: Archives, Journalism, and Participatory Heritage

In this context of museal silence and environmental amnesia, it is significant that the most prominent narratives of Indiana's toxic heritage are from activist voices outside the formal heritage sector. The example first is a project developed by Ryan T. Schwier who combined his public history, library science, and law training to create the Indiana Legal Archive, "a digital platform for exploring the state's rich legal heritage." (Schwier 2016). The main project was a legal history of the environmental justice movement in the USA focusing on the ecological implications of residential segregation in Indianapolis. With images, maps, and case law history, Schwier traced the historical processes and consequences of environmental racism in the city through practices such as redlining, the Combined Sewer Overflow system, and urban development policies. Another significant contribution to Indiana's toxic heritage narrative has been a sustained project at the *Indianapolis Star*. Reporters<sup>5</sup> funded by the nonprofit Nina Mason Pulliam Charitable Trust have covered the state's environmental issues, integrating history, contemporary politics, and science, as well as the lived experiences of Indiana residents through articles, photo essays, multi-media long-form journalism, and social media.

Another response to silences about the state's environmental harm has been to mobilize participatory heritage in an activist scholarly mode. The projects share Roued-Cunliffe and Copeland's definition of participatory heritage as "a space in which individuals engage in cultural activities outside of formal institutions for the purpose of knowledge sharing and co-creating with others" (2017, xv). The projects are also part of a broader trend in the cultural heritage field to democratize knowledge, share authority, and engage a wide range of participants in active meaning-making (e.g. Adair, Filene, Koloski eds. 2011; Byrne et al. 2018; Kryder-Reid ed., 2018; Ševčenko 2023; Simon 2010) and deploy heritage to help people imagine and act for change, particularly around environmental issues (e.g. Harrison et al. 2020; the Climate Heritage Network, and the Coalition of Museums for Climate Justice).

A catalyst for participatory heritage research on environmental issues in Indianapolis was the invitation to IUPUI Museum Studies and Public History faculty to participate in the Humanities Action Lab's (HAL) collaborative project "Climates of Inequality" (Sevcenko 2023, 259–273). IUPUI students and faculty partnered with the Kheprw Institute (KI), a grassroots community development non-profit, and other community partners to research the history of Indianapolis waterways and to investigate the city's environmental racism and environmental justice issues. They produced exhibits (Figure 13.6), public programs, social media sites, and digital humanities, including StoryMaps and a Twitter thread (for details see the Toxic Heritage website and Kryder-Reid et al. 2021a, 2021b, 2022).

The projects were an intervention into the silence around environmental harm, and their goal was to raise awareness and provoke dialogue about Indianapolis' toxic



**FIGURE 13.6** *Climates of Inequality* exhibit at the Indianapolis Central Library, January-February 2020.

heritage, as well as to amplify the voices of community advocates and activists. Bringing the history of the city's environmental harm into public discourse spaces sought both to raise awareness of the contamination of past industries and to illuminate the structures and policies that perpetuate the practices.

## Conclusion

The paradox of dry-cleaning toxic heritage is that it is materially pervasive and yet largely invisible, manifested predominantly in silence, forgetting, avoidance, and denial. The historic processes of industrial and residential churning combined with governmental interests in denying or deferring risk are important factors (Frickel and Elliott 2018). There is also a clear record of the benefits for polluting industries to avoid accountability for their toxic legacies, whether accounting that displaces environmental damage costs or the practices of declaring bankruptcy, transferring assets, or successive purchases by parent companies that shield the perpetrators from responsibility. But the practices of silence and suppression go beyond the processes of urban development and the self-interested avoidance of businesses. It also speaks to the broader failure to reckon with the current state of the planet and to locate that harm squarely as our heritage. Yet heritage, particularly collaborative, participatory heritage, can be a tool to reclaim those silenced voices and hidden stories. It can be used to give voice to the waterways and soils and plants and animals that have been impacted, as well as the human communities. It can help blur the

artificial distinctions of nature and culture, science and history, and name pollution, climate change, and biodiversity loss as a central heritage of our time.<sup>6</sup>

## Notes

- 1 The Tuchman site was later designated as the Keystone Corridor Ground Water Contamination (INN000510399) and placed on the National Priority List in 2013 due to the actual and potential contamination in municipal wells.
- 2 Federal legislation (CERCLA) was passed in 1980 creating a program where sites, known as “superfund sites” are eligible for EPA funding and management for decontamination.
- 3 Indianapolis has also long had Asian-American-owned laundries and cleaners which tend to be family-owned and operated single-location stores (Mullins 2016).
- 4 The exposure for people of color continues. A 2017 national study identified c. 20,600 dry cleaners employing nearly 160,000 workers, with approximately 80% identifying as a racial or ethnic minority (Ceballos et al. 2021).
- 5 Reporters in these positions have included Emily Hopkins, Sarah Bowman, and London Gibson.
- 6 This research was supported by a grant from the IUPUI Arts and Humanities Institute.

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