

VOLUME 3, ISSUE 1

HEALTHCARE
SOCIAL
POLITICAL DISABILITY
ENVIRONMENTAL RACIAL
JUSTICE
GENDER INCOME
IMMIGRATION
SOCIOECONOMIC

ENGAGE!

Co-created knowledge serving the public good

gaze

KATHERINE V, WILLIS

We accept you
 As living sentient beings
 Only when we gaze on you--
 As an inhabited body:
 The metaphor:
 Your branches--arms
 Your trunk--a torso
 Your leaves chattering
 Susurrus susurrus

Your body belongs to us
 Attiring with seasons
 Dis-attiring
 You hold power over us
 Like the weeping willow
 Pensive, wet at the river's edge
 Where narcissus drowned

We name your ugly cousin
 Sycamore with her psoriatic peeling skin
 Your seductive sister
 Sweet maple dripping on our pancakes
 And female ginkgo--
 Full of soft fleshy stinking seeds
 We love you the best.

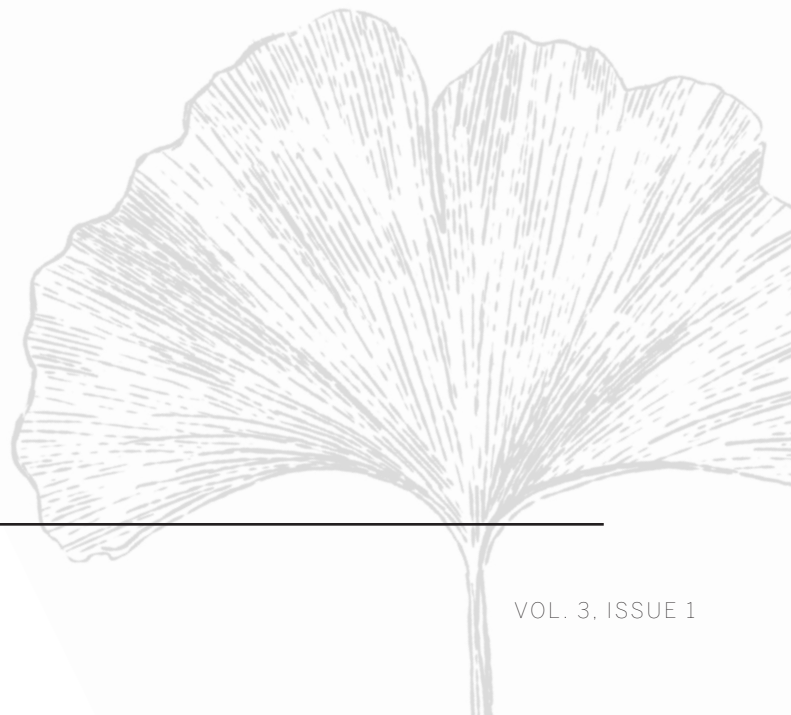
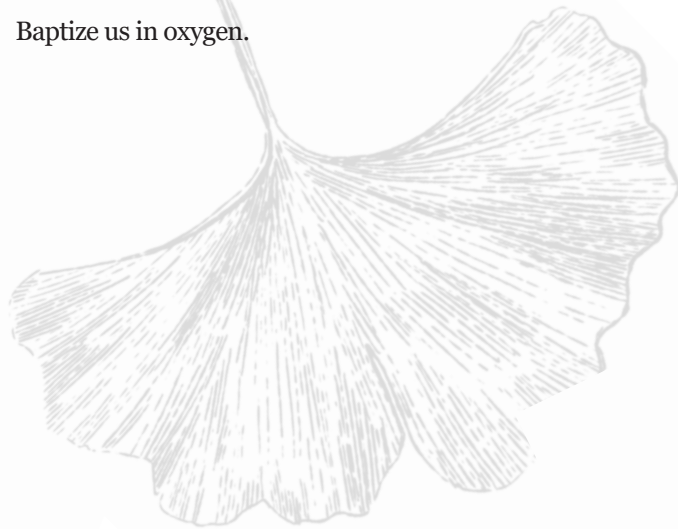
Ebony, we won't forget ebony
 Ancient ebony,
 Black root of earth ebony
 We know you, Trees.
 We own you, Trees.

occupy

KATHERINE V. WILLIS

The logging trucks pitch and roll
Along the narrow rural roads
To buzzing sawmills,
To Carolina furniture factories,
To those snippety smug euro homes
Consuming warm red
Cool white oak planking
Under foot.

You are like the lungs of the earth,
You are a simile converting
The sun into hope
We trust you will
Baptize us in oxygen.



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IUPUI JOURNAL

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*Read past issues of ENGAGE! and
calls for submissions at:*

[HTTPS://ENGAGE.IUPUI.EDU/](https://engage.iupui.edu/)

Welcome

KHAULA MURTADHA, EDITOR

“Anthropocene” is a word that in the past I would never have used, but like I said—in the past. I would not have used it in conversations with friends, colleagues or community research partners but will now challenge myself to do so. The word combines the root “anthropo”, meaning “human” with the root “-cene”, the standard ending for “epoch” in earthly time. The word forces me to think about and feel the pain of this period of human dominance where unchecked, world-wide money-making, money spinning, unbridled economic systems threaten humanity as it heaps upon us all and generations to come, what may become irreversible ecological harm. “We are living in a time many people refer to as the Anthropocene. Humans have become the single most influential species on the planet, causing significant global warming and other changes to land, environment, water, organisms and the atmosphere.”

According to Lutz and Neis, in *Making and Moving Knowledge* (2008), the principal challenge for human-kind in the 21st century “. . . will be to achieve a truly sustainable relationship with the environment while developing socio-economic and cultural systems that ensure human rights, comfort and dignity.” Environmental justice, in practice, suggests an engagement with movements, expanding the conception of social justice and the reality of injustices, in neighborhoods, in the air, in one’s food, at the workplace, in schools or where we recreate (Schlosberg, 2013). For this issue, the scope of contributions is broad, defining environmental justice within a number of contexts. For example, a submission described particulate matter and the effects on urban environments, another author discusses issues with water quality and the work of citizen scientists. The contributors contextualized but also personalized the notions of environmental justice.

Community engaged participatory policy work is explored in this issue as one approach with the potential to inspire this change. Our policy segment tells how public policy that is participatory in nature can contribute to environmental justice. Contributors explore how issues make it to political and policy agendas and how to influence the influencers who control these agendas. We invited policy briefs and articles reflecting analysis, formulation, implementation, and policy evaluation.

Concepts are clarified for us all to understand. For example, we can understand that hot air dries out soil – the soil becomes less absorbent. So when there are heavy rains more flooding occurs. Witness the loss of lives during the perilous August, 2021 flooding of Tennessee communities. Elsewhere, United Nations’ Intergovernmental Panel on Climate Change delivers gloom-filled, if unsurprising, news that in the coming decades we will experience 1.5 degrees Celsius of warming. But with the right priorities, avoiding further warming remains within our reach, even as the intensity of natural disasters continues to mount. “The steps are clear: To reach net-zero emissions by 2050, fossil fuel use must be curtailed as promptly as possible, though removing carbon from the atmosphere will likely be necessary to mitigate the emissions that remain. A collective sense of urgency is key.” It is evident, we cannot wait, as members of communities, as a nation, as the human population on this planet, we can’t wait for decades before we make changes in our lives.

Co-authors for this special issue considered intersections of environmental justice and racism; tackling the ugly disproportionate impacts of environmental hazards on marginalized, minoritized urban and rural communities. The damage done is exponential in effect, and as a result these same communities are disproportionately hit by the COVID 19 virus as

well as its now more contagious variants and they, our neighbors, continue to live amidst the costs of hospital bills and overdue rent payments. These are deep, serious concerns. To call attention to and to give voice to these concerns, community engaged researchers and community catalysts (people with boots on the ground fighting for equity) are undertaking action-oriented inquiry. They are asking tough questions but we ask “who is listening?” Who is engaged in critical conversations and activism out of necessity in this anthropocene era? Are we as a public listening to the research, and are we willing to act? Can we learn from the intersections of race, economic status and environmental injustices apparent in Flint, Michigan and take action when we see this happening again and again in redlined, historically segregated communities.

Can we carefully listen to the voices of incarcerated women and men to help us dismantle the systemic racism pervasive in the criminal justice system? Can we act to lift and make resounding Black, LatinX and low income voices heard to expose the environmental hazards in their communities while having less access to our legal and political systems than White wealthy communities? Can we act?

Education and action must occur on the global scale. Consider the words of the youngest Nobel Prize laureate and activist for female education, Malala Yousafzai, who told the 2021 Girls Education Day summit that improving education had to be a key part of pandemic recovery. Malala spoke to the importance of investing in education, particularly for girls who had fewer opportunities just because of their gender. “The world is facing a girls' education crisis,” she said, “. . .with more than 130 million out of school around the world and many millions more at risk of not returning after the pandemic. . .their futures are worth fighting for.” Malala and we, the editors, fear for our Afghan sisters and their families.

We are compelled to amp the UN “Sustainable Development Goals” (SDGs). According to the United Nations agenda for Sustainable Development “We are determined to end poverty and hunger, in all

their forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment.” There are 17 Goals: No poverty; Zero Hunger; Good Health and Well-Being; Quality Education; Gender Equality; Clean Water and Sanitation; Decent Work and Economic Growth; Industry, Innovation and Infrastructure; Reduced Inequalities; Sustainable Cities and Communities; Responsible Consumption and Production; Climate Action; Life Below Water; Life on Land; Peace Justice and Strong Institutions; and Partnerships for the Goals.

Need to know more? Please check out [United Nations Sustainable Development – 17 Goals to Transform Our World](#) ; [Trans-forming our world: the 2030 Agenda for Sustainable Development | Department of Economic and Social Affairs \(un.org\)](#)

It is clear our humanity stands at a critical juncture. We have entered a new geologic era called the “Anthropocene,” because we humans have caused vast ecosystem devastation disordering the planet’s climate; driving species disappearance, while generating unfathomable amounts of toxic waste and unconscionably wasting life. We have perpetuated issues of racism and injustice to people, many of whom now are refugees, fleeing from dangers of genocide. Yet we say we want systems of justice. It’s been said that justice begins where inequality ends-- and I would add that accountability is needed to reach that juncture.

Humans have become the single most influential species on the planet, causing significant global warming and other changes to land, environment, water, organisms, and the atmosphere.

Editors

KHAULA MURTADHA
IUPUI

ANDREA COPELAND
IUPUI

Associate editors

WILLIAM B. CROW
Lehigh University

**CAROLYN GENTLE-
GENITTY**
Indiana University

JIM GRIM
IUPUI

RITA HODGES
University of Pennsylvania

NATASHA HOWARD
Morehouse College

TERRI JETT
Butler University

BRENDAN MAXCY
IUPUI

CAROL MULLEN
Virginia Tech

MARY PRICE
IUPUI

CAROL ROGERS
IUPUI

JAVIETTE VASHAN SAMUEL
University of Tennessee
Knoxville

SARAH STANLICK
Worcester Polytechnic
Institute

ELLEN SZARLETA
IU Northwest

LAURA WEAVER
Indiana Campus Connect

**Office of
community
engagement staff**

LIZ M. TERRY

MARISA WATSON-JUÁREZ

Designer

RIO SANTOS
IUPUI

**Online
journal
development**

TED POLLEY
IUPUI

An Interview with Associate Vice Chancellor Hillary Kahn

Hilary E. Kahn is Associate Vice Chancellor for International Affairs at IUPUI and Indiana University Associate Vice President of International Affairs. She is also editor for the Framing the Global book series with IU Press and Associate Professor of Anthropology at IUPUI. She has been in the field of international education for nearly two decades and is the author of multiple articles and four books. At her core, Hilary is an ethnographer, an identity through which she views the world and that anchors her commitment to advancing global learning and chipping away at our territorialized notions of responsibility.

Q: How did you first become interested in leading the campus in advancing the Sustainable Development Goals (SDGs)?

Kahn: I first became interested in the intersection of the UN Sustainable Development Goals and internationalization with my work internationally. I was having a number of conversations with colleagues and institutions and international education leaders and scholars from around the world, when I was the president of the Association for International Education Administrators. And everybody was talking about the UN Sustainable Development Goals and how we needed to fulfill that agenda

through the lens of international education. And I knew that very few people, very few institutions, very few people, very few communities in the United States were having such conversations. So it truly was through my international networks that I started seeing how important it was for institutions to embrace the agenda, but I also saw the unique position of international offices to take it on and to in some ways lead these efforts. Even so, while the SDGs are global in scope they are also manifest and made real in local context.

Q: Can you say more about why these international offices are unique, especially at the

identities are often extremely rooted, in our particular cultural, historical, geographic locations. And we don't often expand ourselves beyond these concentric ways of thinking about our identities. We don't identify with our broader connections. Then the same thing goes for our sense of responsibility. Because our sense of responsibility and sense of commitment is very much layered on top of how we define ourselves. But if you started to define yourself and reflect on yourself and see yourself global and complicated and multilayered and transnational, which is what we really are. That everything we do is actually somehow impacted or informed by global phenomenon, processes and powers and people. If you can do that, then you can start to dissect yourself and your identity, then you can start to care about the world too. But the first step actually starts with yourself. Just like all learning starts with yourself.

Q: But what does that mean when we are messaging to our local communities so that they do move beyond that sense of space, bounded space?

Kahn: I think there is such a misunderstanding about how international Indiana already is. Do you know that nearly one in ten households speak a language other than English at home! And there are around 275 languages spoken in the state of Indiana. Can you believe that?

Q: Yes, this is what we are finding out from the Immigrant Welcoming Center too.

Kahn: Incredible. And so it is really an educational campaign that we need to be doing and starting with the fact that our definition of Indiana needs to be dismantled [It needs to be] diversified, and be much more complicated than it is. The definition of a Hoosier needs to be revised. Internationalized. Because it is inherently about difference. Even think about things that are the epitome of Indiana. Motorsports. We can't build our cars without international commodity chains.

And we can't think about just the sport itself. It's intensely global. Think about limestone quarries, and where all that limestone ends up in buildings all over the world. Think about where all our corn, ducks, soy beans, and engines land around the world. Think about all the people and companies we have here in Indiana. Think about everything. It's all about the way it's being framed. And, we are framing ourselves as this land locked, isolated state, when all you have to do is live here for a little while and realize that that's the farthest from the truth.

Q: When you said it is the way it is framed, can we link that to the educational work that you referenced a moment ago? What would that mean in terms of our relationship with educators.

Kahn: I always think part of global learning and any powerful critical learning process starts with rethinking whatever categories you're supposed to be starting with. And in this case it's about starting with the diversification of our definition of the state of Indiana. And as you say, 'educate,' what does that mean about the educational mission? I don't know whether this is where you're going or not, but we need to redefine the term 'educator.' I always like the fact that we've gone away from calling ourselves 'professor' or that we often call ourselves educator. But we need to be learners too, right? We try to focus on processes of learning and educating and not necessarily identifying or aligning them with a particular person. So we're almost at a point where we need de-territorialize that; to decouple the process of learning and teaching away from these preordained categories or appointed positions and so on. We need to make it more about the process. That's actually one thing I recognize. We're proud of our learner-centric learning, right? But it should really be learning. It is about learning. It's about the process and what comes out of it.

Q: You are making such an incredible important point about the process. Say some more about your vision for furthering the UN sustainable

development goals. Where do you see it going for your vision?

Kahn: It's interesting. I think I entered into the work with the Sustainable Development Goals very focused on international education. And, and as you said, it's a cornerstone for our efforts for internationalization at IUPUI. I'm delighted that we're able to move on that. But I really do see it as more than international education. And I want to make sure that we are able to decouple the SDGs from our global identity. Because this is about what we do locally as well too. And this is what we do generally with the communities that we engage with. We can move this agenda forward when we're working together; when we're working collectively, when we're working as partners. One of the SDGs is about partnership. It's one of the most critical ones. Number 17, it's the last one, but it's really the first one. It's where it all starts. And we need to be doing that with people and communities all over the world and in ways that are very reciprocal and transformational, and not necessarily about what we're getting out of it, but it's about what we're doing together.

Q: I know that notion of 'together.' People often say that. But how do we foster equitable partnerships? I think that is a major challenge if your vision is to really have these reciprocal relationships; this transformation of what we have been doing. How do we really foster this as a part of your vision and furthering the work?

Kahn: I think it's an area where we can contribute. It is in our office's DNA, thanks to the work of people like Susan Buck Sutton. But I do think we must work hand-in-hand with offices of community engagement. We should probably need to have more really good conversations. And now that I'm talking to you, we should do an event, specifically about that—community, reciprocal,

transformational bi-directional partnerships. What does that really mean? How do you develop these? Because it's one thing to say you do it and it's another thing to actually do it. Too often we end up falling back on those darn categories, you've got those darn binaries that you need to undo. And I think in many ways that's what's lovely about the sustainable development goals- is that it's not about binaries out the system. It's about how this is all connected and holistic, and integrated, iterative, integrated and interdependent.

Q: You mention the interdisciplinary and the iterative. Those are two words and 'engage' we will probably ask you to elaborate for just our everyday readers. Because it is a journal for supporting faculty and staff and students, but it is also for our community. And so when you talk about interdisciplinary work and iterative work, those are not necessarily words some of our folks out in the community would use. Can you say a little bit more about what the two words mean?

Kahn: Well, it's not linear. Right? It's not about even having even a preordained sense of where you're going. It's about letting the collective knowledge production be the direction. It's about allowing the empirical to speak. Don't ask me to define that one either.

Q: But I am tracking with you. That is our tag line for ENGAGE! co-created knowledge, serving.

Kahn: It's about serving, but it's allowing the process to direct you. And so many people are uncomfortable with that lack of direction. Unless are goals are truly collectively articulated, then there will always be the power differential. You see quite a bit on that international level when we're talking about international partnerships and locally too. You have a big power house like Indiana

University and IUPUI, working with communities. It's tough to truly focus on the collective and to do things together, and even when you try and even when you have the best intentions, it's still very difficult. So you must constantly be checking yourself, constantly going back and re-learning and rethinking and reeducating and making mistakes and recognizing that this is a process, an iterative process that will never be fully completed. The sustainable development goals, there is not an end point, even though we have a lot of metrics and so on. It's a process. And it will constantly be a process, making the world a better place. It always can be better. There's always room for advancement. There's not a best. There will never be a best place. Even the term 'best practices,' there's no such thing as a 'best practice.' There's a lot of promising practices that we should adhere to. But there's always room for improvement. And the interdisciplinary nature is just so key. We can't do this by ourselves. We can't pick your profession, your discipline. We have to do this collectively too. And I think global learning and community engagement recognizes that. The sustainable development goals clearly recognize that. This must be done with as many different perspectives, with as many different ideas with as many different theories and methods and forms of practice and different ways of doing things, and different ways of interpreting things. That's how you learn, right? And we've learned that too. That's where you are creative. That's where you're nimble. That's where you're the most skilled. That's where you're better is when you're working together.

Q: Better together. You talked about being nimble, it made me think about how many times within our disciplines we are not necessarily nimble. Sometimes we are very confined.

Kahn: The other day we were talking about our

cultural lenses through which we see the world but disciplinary lenses, oh my goodness! I mean, that's another great example of how we're enculturated into a thought process that we're not even aware of it. It's so tacit- it's why it can be so difficult to teach disciplinary thinking.

Q: Sometimes it is about the teaching-- not necessarily supporting the learning. . . . This disciplinary lens is enculturated just like you said. Yes, it is all these, there are all these theories. The theories.

Kahn: I think there's a misunderstanding that interdisciplinary work is somehow a threat to the disciplines. But I think it actually makes you a better disciplinary thinker. It makes you stronger. If you're able to strengthen that positionality through diversity. It isn't just about gender equity, but about poverty, about cleaner cities, about education,. . . It is about Social Work, Anthropology, and Public Health.

Q: Is it about intersectionality?

Kahn: Yes, it's about intersectionality. And that's the only part about the SDGs that kind of irks me sometimes. It's those darn boxes. They're beautiful, but they're not meant to stay in boxes, right? They should come up with something else- puzzle pieces perhaps.

Q: There is another diagram that I wanted to put next to this interview column. And I looked at the ones with the boxes. I liked how they had a little definition with each one. But the boxes. . .

Kahn: That's not the point. And that's why I always have a hard time, like what could we do to scale this up? Should we have a theme for the campus? Should we choose a goal and then we can all focus on that. I'm not against that. But again, I just don't think that this is about choosing



a particular global issue. It's might be about focusing on one, but then always recognizing the interconnections between them. Which is why it's such a powerful curricular piece too. And such a powerful research device as well. Actually, the grant that we are collaborating with OVCR [the Office of the Vice Chancellor for Research] on is requiring the proposals to cover at least two of the goals. So again, that interdependence, whether it's between goals; between local and global, whether it's between partners-- that's so critical to what we do.

It is also critical for us to translate our work at IUPUI, all of the work, from research, to service, to teaching, into the lexicon of the SDGs. Because what we found out a year and a half ago when we were starting this work in early 2020, was that nobody really knew what the SDGs were-- maybe about half of them. But then when you started to outline all the 17 different SDGs: about gender equality and healthy lives and ending hunger and ending poverty and so on. Then they were all like, 'Oh, well, of course I do that.' And then it ratcheted up to something like 90 percent were contributing to the SDGs in one way or another, but they just weren't doing it in the lexicon of the SDGs. And so Ian McIntosh, in our office, is actually working in this area and translating what we do at IUPUI into the vocabulary of the SDGs. And so we're going to keep working on that.

We are currently doing this school-by-school but we do need to do it more systematically. We need to start developing a more formal inventory. Institutions of higher education are doing that. I just received something from UC Davis. It was so beautiful. They are really doing such great work and have great support. And I think we have that at IUPUI as well. We've got great support, but we need to ratchet this up a bit. We need an "All In" approach.

Having an All In approach includes connecting more with business. The business communities in Central Indiana and beyond, care about this work, and they need research to support it. I think there's many, many more businesses that are committed to this work than people would ever know. Some of the biggest advocates for this work are coming out of our business community. And that includes businesses and CEOs in Central Indiana. There's the UN Global Compact. That is where businesses and institutions sign on to a sustainability agenda. And two of the biggest, Cummins and Lilly, are signed onto it. They represent an important cornerstone of scaling up this work.

Q: Are US foreign policies impacting other nations around the world as to global health and wellness?

Kahn: Let me just say this--that nothing that we do in the United States or, I think anywhere, is done in isolation. And everything that is done, from policies to our practices, to our preferences, to our various different commodities, we do not do it in isolation, there is always a ripple effect. And it ripples in ways that I think we can't even ascertain. We have no idea. That's why I think one of the problems, just generally a foreign policy, not just US foreign policy, but all policies, all everything-- is that it's so hard to really understand the ripple effect. And we all can think of so many different examples of when we've created a new policy or a new approach or a new law thinking that we are going to be stamping out this, or helping in this area when in fact, we are completely blind to what it's doing and other areas. And I guess this comes down to need to be thinking holistically, systemically, about the interdependence of it all. And that's a skill set though that we don't learn. We are taught to think as individuals. We're taught to think in isolation. We're taught to think about categories. We learn to think within disciplines. We're taught to think about the present, and not

necessarily the future either. So the more that we can be thinking-- across our boundaries, across our borders, across all our different policies and practices and the different phenomenon that we encounter on a regular basis, then the more apt and the more able we might be able to think about that impact of our policies. So that's how I'd be answering that question. It's hard though. How are we supposed to know? I think about if we can at least know-- see those connections, then we'll start to understand that we need to be thinking about the longer-term impact. It goes back down to the sense of responsibility, right? If we're only thinking about ourselves; and if we're only thinking about our own geographic territories, or if we're only thinking about one problem and one issue, then our ability to think more broadly- to have a responsibility that transcends oneself and one's localized sense of who they are is severely limited. We need to be having a broader sense of self, a global sense - a global sense of the United States, a global sense of Indiana. And that's how we make change. Ultimately that's how we make the world a better place.

The business communities in Central Indiana and beyond care about this work, and they need research to support it. I think there's many, many more businesses that are committed to this work than people would ever know.

Q: And that's how we ultimately make the world a better place. And it's never the best place.

Kahn: No! And what fun would that be anyway?

Authors

GABRIEL FILIPPELLI

Department of Earth Sciences IUPUI

Center for Urban Health, IUPUI

Environmental Resilience Institute, Indiana University

REV. IVAN HICKS

First Baptist Church North Indianapolis

GREG DRUSCHEL

IUPUI Department of Earth Sciences

JASON M. KELLY

IUPUI Arts and Humanities Institute and Department of History

JOHN SHUKLE

IUPUI Department of Earth Sciences

SPENCER STROUT

IUPUI Department of Earth Sciences

NATALIE NICHOLS

IUPUI Department of Earth Sciences

DAWSON STROUD

IUPUI Department of Earth Sciences

MEGAN OTTENWELLER

IUPUI Department of Earth Sciences

MARISA LONGBRAKE

IUPUI Department of Earth Sciences

LEAH WOOD

IUPUI Department of Earth Sciences

BENJAMIN CLARK

IUPUI Arts and Humanities Institute and American Studies Program

KEVIN FRYLING

Office of the Vice President for Communications and Marketing, Indiana University

Addressing Risks of Lead in Water and Soil

Using citizen science and a unique partnership with faith organizations

ABSTRACT

One of the most widespread environmental health hazards in the United States remains exposure to the harmful neurotoxin lead. So much lead remains in the urban environment that it is not unusual to find neighborhoods where more than 10% of children exhibit harmful levels of lead, compared to the national average of about 1%. To overcome this challenge, a partnership between IUPUI researchers and faith organizations in Indianapolis takes aim at the risk of household lead contamination by providing residents the tools they need to protect against it. The community-driven science aspect of this project is intentional—not only will the individuals who participate benefit directly, but the resulting data will also play a role in keeping communities safer more broadly.

One of the most widespread environmental health hazards in the United States remains exposure to the harmful neurotoxin lead. Although the U.S. decades ago outlawed the production of materials that contained lead, such as gasoline, paint, and solder, its dangerous legacy lingers in older cities and neighborhoods. The lead remains on old structures painted with lead-based paints, and in the water pipes that comprise our aging drinking water infrastructure. But what many are not aware of is that a major repository of lead is soils and the dust generated from them. Why soils? It is because they captured a century of lead deposited from burning leaded gasoline, industrial sources, and degrading lead-based paint, and concentrated it in the upper few inches of soils where children play and vegetables grow. It is this lead-

infused soil that generates dust on dry summer days.

So much lead remains in the urban environment that it is not unusual to find neighborhoods where more than 10% of children exhibit harmful levels of lead, compared to the national average of about 1%. If lead is present in a young child's blood while their brain systems are forming, it permanently distorts the critical neurons that do all of the signaling and communications work in the brain. The result of this exposure is the stuff of a behavioral psychologist's nightmares—permanently lowered IQ, increased attention deficit disorders, poor short-term memory, and decreased risk-aversion. Incarceration rates for individuals exposed to lead in their youth are higher than individuals without high levels of lead in their bodies, a statistical correlation that is tied to the negative neurocognitive impacts of lead poisoning. Legacies of racism and segregation mean that lead exposure rates are significantly higher for lower income communities of color, creating economic and educational challenges for these communities that can last for generations.

To overcome this challenge, a partnership between IUPUI researchers and faith organizations in Indianapolis is taking aim at the risk of household lead contamination by providing residents the tools they need to protect against it. As a part of the Center for Urban Health at IUPUI's long-term effort to map lead levels across the city—and in collaboration with the IUPUI Arts & Humanities Institute's research on the Anthropocene—are working with the Indianapolis Ministerium's Faith Lead Initiative to distribute lead test kits to residents on the near northwest side. With funding provided by the Indiana University Environmental Resilience Institute through the Prepared for Environmental Change Grand Challenge program, the kits provide participants with free, reliable

It's relatively low concentrations. But once you get any lead in your body, the acids in your stomach dissolve it, and it gets in your bloodstream. And once it's in your blood, it's very hard to get out because it's stored in your bones.

lab results on potential lead exposure in their homes—information that is often out of reach due to barriers such as cost and lack of education on the risks of lead.

The tests' results will also contribute to anonymous public data on household lead levels across Indianapolis through the center's Map My Environment website. This is the first time the website will contain data on lead levels in water, along with the soil and dust being collected as part of this effort. There are regulations about the allowable amount of lead in water, but the truth is there's no safe level of lead. The concerns on this front are real, as evidenced in a 2020 report on childhood lead poisoning from the Indiana Advisory Committee to the U.S. Commission on Civil Rights.

The project's focus on tap water is significant since lead contamination is most common in homes with aging infrastructure, such as lead pipes, which can lose the protective mineral layer that prevents heavy metals from leeching into drinking water. The challenge is we're not talking about a large amount of lead; it's relatively low concentrations. But once you get any lead in your body, the acids in your stomach dissolve it, and it gets in your bloodstream. And once it's in your blood, it's very hard to get out because it's stored in your bones.

Indiana does not provide free home lead analysis until children test positive twice for elevated blood lead levels. Furthermore, the state's threshold for elevated blood lead levels—10 micrograms per deciliter—is twice the amount regarded as elevated under national guidelines provided by the U.S. Centers for Disease Control and Prevention. But, the truth remains there's no safe level of lead—especially for infants and toddlers.

Research has consistently shown that lead testing rates are significantly lower in communities of color, even as the poisoning rates are significantly higher. In response to these inequities, the center's testing efforts focus on homes in downtown Indianapolis between Kessler Boulevard and Meridian Street, from 16th to 38th streets. A second, larger phase of the project—open to

residents across the state—is planned for later summer, 2021. This effort is supported by the Environmental Resilience Institute at Indiana University.

In spring 2021, volunteers at First Baptist Church North Indianapolis assembled the first 200 lead test kits (Fig. 1) for distribution in cooperation with local organizations such as GroundWork Indy, the Kheprw Institute, the Flanner House and partner churches of the Indianapolis Ministerium.

Another 200 kits will be distributed in Muncie, Indiana, in cooperation with Ball State University. The kits include bottles for sampling water and bags for sampling soil and dust, along with educational materials on lead protection (Fig. 2).



Fig. 1. Community members assemble the water lead test kits at First Baptist Church North Indianapolis.
Photo credit: Liz Kaye, Indiana University

The lead testing project spoke to church leaders' desire to provide leadership and programming to improve their members' health. The fact that participants could learn about their home's lead levels while keeping the home's location



Fig. 2. The collection kits include bottles for samples and informational material on the risks of lead in homes.
Photo credit: Liz Kaye, Indiana University

anonymous was also significant, as some members were hesitant to pursue professional lead testing due to concerns about government repercussions.

The collection effort builds upon previous work from the Center for Urban Health, which has offered free soil analysis since 2012 and free dust analysis since 2018. Over 2,500 soil and 600 dust samples have been analyzed since the start of these programs, with results returned to participants. The center had not been able offer free water testing until now because water collection requires special equipment compared to plastic baggies for dirt and soil.

Each kit includes five plastic water vials, a large bag to collect household dust, three small bags to collect soil samples, and informational material on lead in the home. These kits are returned to the laboratory at IUPUI where they

undergo an array of analyses to determine the content of lead in water, soil, and dust (Figs. 3, 4). A numbered sticker is used to protect the anonymity of participants, and the results are returned to the participants themselves, with recommendations on how to mitigate any hazards that are detected. In the case of lead, mitigation is pretty straightforward, so long at the source of the exposure (soil, dust, water) is identified.

The community-driven science aspect of this project is intentional—not only will the individuals who participate benefit directly, but the resulting data will also play a role in keeping communities safer more broadly. This type of partnership is designed to provide true agency to the participants—these communities have passion and commitment, and only lack science to take action to protect their children’s health, and indeed, the well-being of the community moving forward. Additionally, the results are valuable research tools themselves, having contributed to over a dozen peer-reviewed journal articles in scientific journals. Of course, most normal human beings who aren’t in the academic world don’t read scientific journals. That’s why our program is steadfastly committed to producing parallel informational products that are designed with and for the general public, and we recommend that other community-driven science programs do the same. Such reciprocity is vital for truly meaningful community partnerships.

This type of partnership is designed to provide true agency to the participants—these communities have passion and commitment, and only lack science to take action to protect their children’s health, and indeed, the well-being of the community moving forward.



Fig. 3. An IUPUI researcher tests a water sample for lead content in a lab on the IUPUI campus.
Photo credit: Liz Kaye, Indiana University



Fig. 4. Laboratory instruments are used by scientists to quantify the amount of lead in the water samples from households.
Photo credit: Liz Kaye, Indiana University

Environmental Racism in Indianapolis

The Importance of Connecting with
Community Partners

BENJAMIN J. CLARK

INTRODUCTION

“The lead in that soil we found came from an old lead factory that had been in the community. And when they closed, they poured their pollutants into the soil, into the ground, and then it went into the flood... I guess we could just say it went down into the drains, and the city on the streets, and then came back up into our system”

(Anonymous, interview by Benjamin Clark, 29 June 2020, transcript, IUPUI Arts & Humanities Institute).

A longtime resident of the Martindale-Brightwood neighborhood in Indianapolis, an area predominantly populated by Black residents for decades, spoke these words. The quote speaks to the disregard that some companies take toward the environment, especially in majority Black spaces. The experience is but one example of countless Black neighborhoods and communities across the U.S. being polluted by lead factories and other industrial

activities (including dry cleaning¹, oil refineries, manufacturing, and waste disposal).

At the heart of environmental racism is the simple question: Why are Black people disproportionately exposed to pollution in the places where they live? (Aygeman, *et al* 2016; Beliso-De Jesus 2019; Bullard 2001; Bullard *et al* 2008; Cole and Foster 2001; Dillon 2014; Henderson and Wells 2021; Mohai *et al* 2009; Nixon 2013; Pellow 2016; Pulido 2000; Pulido 2015; Pulido 2016; Pulido 2017; Sze 2008; Turner 2016). The question is not new, but has not received enough governmental response when it comes to the experiences of residents in Indianapolis. Meaningful research on environmental racism in Indianapolis has happened but there is much more to be done (*see* Fuller 2015).

Community-engaged research, grounded in the humanities and social sciences and rooted in ethnographic methods, can provide

Author

BENJAMIN J. CLARK
IUPUI Arts & Humanities
Institute

PhD student in American
Studies, IUPUI School of
Liberal Arts

important insights into how environmental racism impacts neighborhoods and communities. I am working on a project called the Anthropocene Household as part of a team of scholars doing community-engaged research at the IUPUI Arts & Humanities Institute (AHI)². The Anthropocene Household explores the current geological epoch, the Age of Humans, on a local level through the lens of the household in order to understand the experiences, knowledges, and practices associated with environmental change (Angus 2016; McNeill 2014; Moore 2017). In my research, I look at the experiences and understandings specifically related to environmental racism. In this paper I explore two different examples of environmental racism in Indianapolis. One illustrates how white privilege creates environmental racism and the other shows the impact of white supremacy in shaping government response to environmental racism. Both examples demonstrate the value in foregrounding voices and experiences of the people who live in impacted communities. Community-engaged scholarship brings peoples' stories and lived experiences to the forefront. We cannot develop meaningful interventions into environmental racism without understanding the lived experiences and creating space to hear these voices.

A critical element in effective community-engaged scholarship begins with establishing working relationships with community partners. There is a wealth of community knowledge wrought by personal experiences and connecting to community partners means that as researchers we seek to tap into this knowledge. The IUPUI IAHI and Anthropocene Household project partners with two organizations based in Indianapolis. Groundwork

Indy (GWI)³, part of a larger national network of Groundwork organizations and based in the Riverside neighborhood, where a groundwater contamination site is located and where lead contamination hotspots are known to exist; GWI assists AHI in distributing free lead testing kits to residents and with recruiting participants in focus groups. The AHI has also developed a partnership with local religious leaders called the Indianapolis Ministerium. Through the Ministerium we have developed a network for distribution of the free lead testing kits. The anonymous results are returned to the household with information about levels of lead in the soil, dust, and water. If unsafe levels are found, the information includes no or low-cost suggestions to reduce risk to their families. In addition, we are working with GWI to conduct focus groups with residents to deepen our understanding of how they define and understand their environment in the context of environmental racism.

WHITE PRIVILEGE AND ENVIRONMENTAL RACISM

“As the child's brain is being developed, they say by the third grade the brain has a hard structure around it, but while it doesn't have a hard structure, lead can get into it. Lead, they say, the body thinks lead is milk or calcium so it absorbs it into the brain and it causes damage to you. It shuts it down in certain areas.” (Anonymous, interview by Benjamin Clark, 21 April 2020, transcript, IUPUI AHI).

One of the most common and least apparent pollutants is lead, which is found in many places in everyday environments. House paint and water pipes are what most people think of when they hear about lead contamination, but a more

¹<https://storymaps.arcgis.com/stories/4d28f320d66e4a449b2bca01e2491b9b>

²Visit <https://anthropocenes.org/> to learn more about these projects.

common and troublesome source is lead in the soil around people's homes. The lead found in soil can easily make its way into people's bodies when they play in the yard, plant a garden, eat produce from the garden, or from dirt on their shoes that is tracked into the house. Sometimes the lead comes from a nearby lead refinery, or it got there from particles in leaded fuel exhaust. Often, neighborhoods with the highest concentrations are ones redlined and subsequently bisected by the interstate system. The presence of lead refineries and interstates are often found in predominantly Black neighborhoods (Hentz, Filippelli, et al. 2018, 1). Many of these historical factors contribute to the state of spatial inequities we see in cities across the U.S. (see Ryan 2021). This first example points to the sort of environmental racism that Laura Pulido blames on white privilege, or the social and spatial mobility of white people and the social and spatial immobility of Blacks (Pulido 2015, 2-6).

The Centers for Disease Control and Prevention (CDC) says there is no level of safe lead exposure for children. Children exposed to lead may experience brain and nervous system damage, developmental delays, learning challenges, behavioral issues, and hearing loss. The effects of lead exposure remain long after removal from a child's environment. Lead can linger in a person's body and cause long-term health problems. Children are not the only ones at risk, either. Adults with lead exposure and poisoning can cause high blood pressure, kidney damage, brain damage, miscarriage, and infertility. ⁴

Exposure to lead is both a public health crisis and an issue of environmental racism. Unfortunately, many people are simply unaware

Children exposed to lead may experience brain and nervous system damage, developmental delays, learning challenges, behavioral issues, and hearing loss. The effects of lead exposure remain long after removal from a child's environment.

of the presence of lead in their environments and the dangers posed by long-term exposure. Dr. Gabriel Filippelli has done extensive research locally and globally into something he calls the "urban lead exposome." An exposome is the total environmental exposures a person has over a lifetime. Filippelli and his research team lead an ongoing project to map urban lead exposome. They make his findings available to the public as part of a citizen-science project.⁵ Filippelli has worked with Indianapolis' Kheprw Institute and residents from Riverside to gather soil samples from homes and yards. The value of doing citizen-science is that it gathers data on a scale that would otherwise not be possible for an individual researcher and it puts power in the hands of the residents (Filippelli 2018, 9). Filippelli explains that a high lead level in the environment is typically identified through human disease rather than proactive environmental testing. This, he says, is "a harmful and backwards approach to protecting public health" (Filippelli 2018, 1). Lead hotspots usually are identified from a cluster of children with high blood lead levels. Community citizen-science shows the value and effectiveness of testing for the presence of lead before a child

³ <https://www.groundworkindy.org/>

⁴ <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>

⁵ <https://www.mapmyenvironment.com/>

exhibits obvious signs of lead poisoning. “Social, health, and economic cost of [lead] exposure from urban soils is steep—far greater than the cost of targeted remediation of soil [lead] hotspots” (Filippelli 2018, 1).

The IUPUI AHI, as community-engaged scholarship, designed a user-friendly lead testing kit to empower households to test their homes for the presence of lead in the water, soil, and dust.⁶ The results will be sent directly to residents so they can have information to make decisions about how best to address issues the results reveal without fear of recrimination or fines by the government. The goal is to provide the information they need to understand the environment where they live and what actions to take to protect themselves and their loved ones.

In the Indianapolis neighborhood of Martindale-Brightwood, the social justice fight over lead contamination was successfully waged by community. Neighbors came together to form a collaborative to make their concerns heard by local officials, and resulted in the area being designated a Superfund site. From the 1940-60s, the American Lead Corporation, a lead smelting operation in the area, left behind pollution for the residents. The Environmental Protection Agency (EPA) and Indiana Department of Environmental Management (IDEM) worked together to remediate the pollution, but this time the EPA took the lead. Thus far, lead-contaminated soil has been removed and replaced with clean soil at more than 100 residential sites. The cleanup process is not complete, but remains ongoing (Fuller 2015).⁷

In an Anthropocene Household oral history interview with a Martindale-Brightwood resident and one of the leaders of the environmental justice collaborative effort said: “...We found that

based on that a lot of people in this neighborhood did gardening. And after we began to look into it a little more and developed a community concern for it, which was our Martindale-Brightwood Environmental Justice Collaborative. We got grants, we did a lot of studies and found out that the soil was not one in which people who didn't know had put gardens in and that kind of thing. So we did a lot of training, got a lot of information, had help from... Well, the EPA had to come out and remediate the yards and put new soil into some of the people's yards. So there were a lot of things that have gone on here since I've been here.” (Anonymous, interview by Benjamin Clark, 29 June 2020, transcript, IUPUI AHI.)

The interviewee raised her children in this neighborhood and, even years after her children had grown up and moved on, I could sense her parental anxiety as she spoke. Entire lives were lived in this lead-polluted neighborhood. This resident still proudly calls Martindale-Brightwood her home and was courageous enough to mount what was, at times, a difficult effort to bring social and environmental justice to her neighborhood and community.

Black children tend to have higher blood lead levels than their white counterparts (Waterhouse 2015, 99). Historical factors, including the Great Migration and redlining, have led to neighborhoods with higher-than-average environmental lead levels to be home to majority Black residents. What this points to within Pulido's theoretical framework is lead pollution as an issue of white privilege when it comes to environmental racism. White populations are able to choose and afford to live elsewhere; meanwhile Black residents are socially and economically bound to neighborhoods that have historically been the site of heavy industry and lead smelting,

⁶ <https://anthropocenes.org/lead>

⁷ <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0501643>

as in Martindale-Brightwood in Indianapolis (Pulido 2015, 2-6; Fuller 2015, 2-3).

In one oral history interview for the Anthropocene Household project, the informant discussed concerns about exposure to lead that children experience at school through corroded pipes and outdated drinking fountains. Another concern for this interviewee is the lead children are exposed to at home. A concern in particular is lead paint, but lead exposure at home also can come from soil, dust, and water. The main issue with all the lead exposure is long-term health effects, physical and behavioral.

The interviewee described an experience he had while visiting a school that illustrated behavioral challenges caused by lead exposure: *“There was a kindergarten teacher that was taking her students from the restroom into the class. There were about maybe twenty-five, twenty-six students. There was this small little girl, kindergarten, she was just having a fit. We said, let’s go help the teacher. The teacher was able to take the other students in, but the little girl was sliding down the wall... When we approached her, I noticed something yellow in her mouth. ‘What’s that in your mouth?’ She was picking the paint off the wall and eating it. I knew that just from other lead issues and workshops that it causes, if your blood elevation is high, not only brain damage, but your ability to handle your emotions. There are anger issues, comprehension issues, and some issues can become irreversible as the child grows”* (Anonymous, interview by Benjamin Clark, 21 April 2020, transcript, IUPUI AHI).

This informant has worked with the local branch of the NAACP and its efforts to raise awareness and take action surrounding lead pollution and exposure in schools and homes—what had him

in the school in the first place—but he relayed the story of the young girl “having a fit” and eating paint because he felt it showed the risks and problems children face from lead exposure.

Without governments and corporations funding large-scale cleanup efforts or dramatic policy shifts at all levels, citizens will have to take matters into their own hands to protect their health and wellbeing. As with most public problems, until institutions catch up and reinvent practices and structures embedded in institutional racism, it is important that community members are empowered with good information and the ability to safely self-advocate.

WHITE SUPREMACY AND ENVIRONMENTAL RACISM

In February 2013 Citizens Energy, a public charitable trust that manages drinking water and other utilities for Indianapolis, notified IDEM about contaminated groundwater (aquifer and wells) in Riverside, a near northwest side neighborhood. IDEM notified the EPA and began evaluating the site for the National Priorities List to trigger the Superfund process.⁸ Superfund is money established to fund long-term expensive projects, and here refers to paying for the cleanup of toxic pollution sites. (The site became known as the Riverside Contaminated Groundwater Site later labeled site 0153). According to public documents from IDEM⁹, it took more than a year to do a site visit to this place known to have contaminated groundwater. In May 2014, IDEM finally visited the area to take water samples. By this time the wells and aquifer¹⁰ were offline and not contributing to the water coming out of people’s pipes. However, the dangerous chemicals were still present in the ground. Evidence suggests the water was contaminated by decades

⁸ <https://www.in.gov/idem/cleanups/sites-of-special-interest/site-0153-ground-water-contamination-site/>

⁹ <https://www.in.gov/idem/cleanups/sites-of-special-interest/site-0153-ground-water-contamination-site/site-0153-potential-responsible-party-prp/>

¹⁰ <https://storymaps.arcgis.com/stories/4d28f320d66e4a449b2bca01e2491b9b>

of commercial and industrial chemicals seepage into the soil and aquifer and proximity to the polluted White River with its problems related to combined sewer overflow. Not coincidentally, this section of the city has been predominantly low income, working class, Black residents for decades.

“They tried to convince us the whole time, ‘Your drinking water is safe. This isn’t the case of Flint, Michigan. Blah, blah, blah.’ I’m like, ‘I’m not stupid. I understand that Citizens Energy is gonna make sure the drinking water is safe, but what about everybody in the neighborhood that has basements. What about these chemicals leaching into the ground and vapor intrusion in the people’s basements? How long has this been going on? Do they need treatment now? Have you tested anybody’s basements?’” (Anonymous, interview by Abbey Chambers, 25 July 2018, transcript, IUPUI AHI).

The Riverside resident provides a clear window into the challenge posed by site 0153. The city, state, property, and business owners on the one hand and the residents of Riverside on the other, and tension over how best to resolve the groundwater contamination. This interviewee had deep concerns that residents were not being told the complete story and that the extent of the problem and potential threats to health and safety were papered over.

Site 0153 illustrates the white supremacy in environmental racism wrought by governmental indifference, favoring private interests over public good, government agencies hamstrung by lack of funding and toothless public policy, and a lack of enforcement of environmental policies, or any sense of urgency. White Supremacy describes

the kind of environmental racism that creates differential protection and unequal enforcement of public policy. Environmental injustice is readily apparent in the dangers posed to Blacks by corporations and governments collaborating to maintain regulatory noncompliance. Even with laws and regulations in place, governments let corporations off the hook when adhering to regulations in any meaningful way (Pulido 2015, 1-6; Melamed 2015; Pellow 2016; Rodgers and O’Neill 2012; Rosa and Diaz 2019; Sampson and Winter 2016; Turner 2016; Waterhouse 2016).

Public debate focused whether to label site 0153 a Superfund site and allow the EPA to fund and manage the mitigation project or to have IDEM take over clean-up efforts. Property owners feared the Superfund label would hurt property values, so community leadership (mostly in the form of the Riverside Civic League), 16 Tech “urban innovation district,¹¹” with federal and state authorities decided to hand the project over to IDEM. The resident quote speaks to the unease and distrust that Riverside residents had of IDEM.

What site 0153 offers in understanding white supremacy and environmental racism is how it provides a glimpse into various responses from community members as the story folds. Residents have a sense of connection and attachment to their neighborhood, even if they do not have a financial investment other than paying rent. Statements and public comments below are found on EPA’s website for the Riverside Groundwater Contamination Site.¹² This website’s public comments are part of the remediation process for Superfund sites. From the comments one can sense tension between opposing sides of the argument over the Superfund label and ultimately

¹¹ 16 Tech is a \$360 million plan for redevelopment of 60 acres of land within the Site 0153 project boundary into 100,000 square feet of research and office space.

¹² <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.scs&id=0510936&doc=Y&colid=33747®ion=05&type=SC>

the most efficacious resolution. The quotes illustrate priorities of the person or organization.

From 16 Tech: *“The Riverside neighborhood in which 16 Tech will be located, along with several other surrounding neighborhoods, welcomes this development and played an instrumental role in 16 Tech securing bond financing from the City of Indianapolis and the City-County Council last year.”* (from Indiana Biosciences Research Institute and 16 Tech Community Corporation to Region 5 U.S. Environmental Protection Agency, 5 September 2016).

From the Greater Indianapolis NAACP Public Statement: *“The Greater Indianapolis NAACP Branch 3053 is actively working with local public officials, neighborhood residents, clergy and minority organizations in support of the local plan and the removal of the site from NPL consideration... As the Greater Indianapolis NAACP Branch 3053 believes with continuous collaboration with the State, City of Indianapolis and Citizens Energy Group we are able to ensure safe drinking water. We look forward to ongoing investigations for remediation to correct potentially contaminated sites that could be contributing to the groundwater contamination”* (Chrystal Ratcliffe, President, Greater Indianapolis NAACP Branch 3053, 7 September 2016).

From the Riverside Civic League: *“The Riverside Neighborhood is at the brink of rising from decades of disregard and we the residents cannot afford to go backwards by becoming a superfund site especially when the reported contaminants can be addressed by a Local Alternative Plan that we help mold and would definitely oversee. Once the community was notified, we came together to hear the voices, fears and concerns of our residents then immediately sought out answers so we could weigh the heaviness of this choice.”* (Peggy Gamlin, President, Riverside Civic League, 12 September 2016).

There are pages of public comments, many posted anonymously. To give a sense for public sentiment, I share a sampling of comments on Superfund designation:

“It would be wrong to designate this neighborhood as a Superfund... The Riverside neighborhood has been a victim of terrible disinvestment and redlining in the past. The neighborhood has been a great partner to the new 16 Tech development occurring in the southern region of Riverside. A listing on the NPL would halt or end entirely that development and all the work that has been done to revitalize this neighborhood” (Anonymous, 27 June 2016).

“As a business owner in this area for thirty years, I believe it would be more destructive to the wellbeing of this neighborhood to designate this area as a Superfund Site than to allow for alternative means of resolution of the purported water contamination... The Riverside neighborhood has seen limited to non-existent investment in the infrastructure or neighborhood amenities for decades. The neighborhood now has a potential investor with the new 16 Tech development that has been proposed...” (Anonymous, 25 August 2016)

A comment from someone who just wants something to happen and does not support one remediation over another: *“I am a homeowner in the NW area of Indianapolis. I would truly appreciate clean water, clean fertile soil, to have my family be safe. I would like a remedy that does the poor and elderly people justice”* (Anonymous, 12 September 2016).

Likewise, residents and tenants deeply invested in the community who wanted the Superfund label desired financial support from the federal government during the Obama Administration. Residents were skeptical of IDEM’s leadership under Governor Pence and the agency’s willingness and ability to follow through on

mitigation. It has been over eight years since EPA and IDEM became aware of the problem and with little progress on contamination removal.

Public comments posted on the EPA website that support Superfund designation include:

“I live at 14th and Delaware and I am very concerned about the water quality in inner city Indianapolis. I sincerely hope the EPA will approve a Superfund to help with this cleanup” (Anonymous, 30 August 2016).

“The community needs resources from the EPA to test our own water. These resources might include financial resources for community organization and education. IDEM is not a trusted entity by any Hoosier I have spoken with.” (Anonymous, 30 August 2016).

“After attending a presentation at the Kheprw Institute that included presentations by EPA staff, and learning of the IDEM related to environmental cleanup (which is very poor), I strongly feel the EPA should designate Riverside as a Superfund site. Economic development is important, but the fundamental consideration must be the health of the people affected by the water supply. The number of people involved means this should be done correctly and as quickly as possible, and IDEM has a history that indicates it is not up to the job. Please have the EPA deal with this as a Superfund site.” (Anonymous, 31 August 2016).

Now offline the wells no longer contribute to the city’s water supply, but remaining concern is vapor intrusion since the chemicals remain in the environment. IDEM site 0153 updates suggest mitigation remains in the planning phase. They only recently identified the method they plan for cleanup efforts.

Anthropocene Household Oral History interview, Riverside resident: *“I do think a big push back from homeowners is the idea of stigma of a*

neighborhood leading to reducing property values and derailing the development plans and projects for the neighborhood. Whereas I think that that was not the first lens we should use to make that decision, or at least have that decision made for the community by these institutional players who’re invested in a certain outcome... The priority was to protect the investment. And it was framed through this lens of local control and stigma that then leads to lowering property values... Because nothing has changed about the environmental circumstances... with the fact that IDEM is doing the cleanup. But the properties are also becoming less and less affordable in the neighborhood, and are quickly rising beyond what I can afford and what others in the community can afford.” (Anonymous, interview by Benjamin Clark, 23 September 2020, transcript, IUPUI AHI).

Having IDEM manage the cleanup, keeping it off the Superfund list, would allow property values in this neighborhood to rise and could protect the investments of homeowners, businesses, and 16 Tech. One resident described how IDEM initially made the call to have the EPA come in and manage the cleanup but after getting pushback from the developers of an area “urban innovation district” had concerns about a Superfund site.

The issue is not about implicating any individuals, organizations, or agencies involved. The problem speaks to the structures in place through public policy that all but ensure the process of holding polluters accountable is difficult, time consuming, favoring polluters over the polluted.

Anthropocene Household Oral History interview, Riverside resident: *“I learned that The Indiana Department of Environmental Management is not only incompetent, but they're dirty. They're liars. They try to play the community for fools...”* (Anonymous, interview by Abbey Chambers, 25 July 2018, transcript, IUPUI AHI).

Distrust that their health and wellbeing are not being looked after, but rather the interests of property owners, business, and corporations invested in gentrification won. The resident explains how IDEM officials in a public meeting seemed to purposely misrepresent the presence of chemicals in the environment—not only the levels but also the types of chemicals—done in favor of development and gentrification, not to protect the health of residents.

Site 0153 has been stuck in a bureaucratic malaise for years. Meanwhile, area low income, working class Black residents live with dangerous levels of chemicals in their environment. Citizens Energy assures the community that the water is safe to drink. The water meets the standards set forth by the Safe Drinking Water Act. Nevertheless, the chemicals remain in the environment where children and adults live every day.

The issue is not about implicating any individuals, organizations, or agencies involved. The problem speaks to the structures in place through public policy that all but ensure the process of holding polluters accountable is difficult, time consuming, favoring polluters over the polluted, resulting in slow cleanup, ultimately rooted in systems of oppression from white supremacy (Pulido 2015; Pulido 2016; Pulido 2017).

An IDEM project manager asked in an Anthropocene Household oral history interview who he identified as his customers, his constituents, said: *“Customers would be environmental attorneys, environmental consultants, their clients, so oftentimes dry*

White Supremacy describes the kind of environmental racism that creates differential protection and unequal enforcement of public policy.

cleaner operators, property owners they're interested in redevelopment or cleanup of their property for redevelopment, industry companies that have operated there that have had releases of contamination that either need to clean it up under regulation or are seeking or desiring to get it cleaned up for business purposes, so those are the primary customers or clients or people that we deal with.” (Anonymous, interview by Abbey Chambers and Stacia Murphy, 19 July 2018, transcript IUPUI AHI).

He clearly states his customers are the polluters. What is absent is any acknowledgement or reference to the people who live in the polluted and contaminated neighborhoods. Instead, he says that their customers did the polluting. As a state agency funded by tax dollars, something seems upside down in his response, but speaks to the ways that the structures of public policy fail to meaningfully improve environmental conditions of lower income Black neighborhoods.

Anthropocene Household Oral History interview, Riverside resident: *“The way IDEM works, they don't have a lot of teeth to hold companies accountable. They tried to work with them and put them into a voluntary program, which again, there are long delays between steps and just hoping people do the right thing and trying to occasionally follow up with them.”* (Anonymous, interview by Benjamin Clark, 23 September 2020, transcript, IUPUI AHI).

CONCLUSION

Site 0153 is an example of regulatory non-compliance wrought by white supremacy that results in environmental racism. The processes move slowly and tend to favor private interests over public good. Subtle and multifaceted processes contribute to this slowness and the power dynamics at play that certainly deserve deeper examination. What ends up happening is that lower income Black and Brown communities are forced to live in polluted environments while the bureaucratic processes play out to favor polluters over the polluted. What is challenging about identifying and calling out white supremacy is that it is so ingrained into our hegemonic white cultural milieu and can be difficult to detect. It can easily fly under the radar. That is the value of Pulido's theoretical framework as it allows us to illuminate the issues more clearly. The regulatory culture around noncompliance is "mutually constituted by the racial formation" (Pulido 2015, 2).

There are many ways to approach this issue of environmental racism. At the IUPUI Arts & Humanities Institute and the Anthropocene Household project, we believe that doing community-engaged scholarship is helpful and meaningful for forming necessary interventions, co-creation of knowledge, and working with impacted citizens to understand and contribute

to finding solutions. Pulido explains that there is ample research that shows how "environmental hazards follow along racial lines but also many of the meta-processes... such as industrialization, urbanization, and capitalism, are racialized" (Pulido 2018, 117). What is fundamentally important about Pulido's point is that the environmental hazards and meta-processes play a role in "determining who lives and who dies" (Pulido 2018, 117).

Environmental racism is at the intersection of systemic racism, systemic poverty, and ecological devastation. If we want to achieve environmental justice, then we are going to have to recognize and call out acts of environmental racism in all its various forms [We're] hoping people do the right thing and trying to occasionally follow up with them." (Anonymous, interview by Benjamin Clark, 23 September 2020, transcript, IUPUI AHI).

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Exploring University-Community Collaborations

ELIZABETH KRYDER-REID, GABRIEL FILIPPELLI with PHYLLIS BOYD, PAULA BROOKS, AGHILAH NADARAJ, ALVIN SANGSUWANGUL, and LEAH HUMPHREY

ABSTRACT

The Riverside neighborhood bears multiple burdens of environmental harm. Running the gamut from groundwater contamination in subsurface waters to lead in soils and dust and paint to particulate matter in the air from highways and industry, these environmental insults harm the physical, mental, and economic well-being of the community. The community has also faced an information gap where data was scarce, hard to locate, and sometimes wrong. Activists have long worked to improve the quality of life in the neighborhood, but faced barriers in the form of policies (e.g. Red Lining, zoning variances, disinvestment in public services such as street lights and sidewalks) and practices (e.g. absentee landlords, illegal dumping). Features such as the Central Canal that were developed into recreational amenities in other parts of the city

were minimally maintained or restricted from use by residents. In the face of these challenges, IUPUI faculty, students, and community members have partnered on multiple projects to document the history of environmental harms, assess exposure and risk of residents' exposomes, and share information in ways that are accessible and relevant for residents. The work supports the agency and activism of the community, particularly as it faces pressures of gentrification and university encroachment with the prospect of 16 Tech project expansion. The work also takes place in the context of contested interests and harmful legacies as representatives of an urban university that displaced longtime residents work to partner ethically and transparently with those same communities. As a result, current faculty-community collaborations operate within a space complicated

Authors

ELIZABETH KRYDER-REID
IUPUI

GABRIEL FILIPPELLI
IUPUI

PHYLLIS BOYD
Groundwork Indy

PAULA BROOKS
Hoosier Environmental
Council

AGHILAH NADARAJ
Kheprw Institute

ALVIN SANGSUWANGUL
Kheprw Institute

LEAH HUMPHREY
Kheprw Institute

by the problematic legacy of harm and ongoing structural racism. However well-intentioned, faculty, students and community members have to navigate that history and enduring power dynamics as they design their research, identify relevant questions, and share results in ways that are accessible and meaningful to community members.

INTRODUCTION

University-community collaborations are complicated, and when tackling environmental justice issues, they can be particularly difficult. This essay explores some of the challenges and benefits of two community engaged environmental justice projects from the perspective of IUPUI faculty members Elizabeth Kryder-Reid and Gabriel Filippelli in consultation with community partners, and drawing on insights from students involved in one of the projects. Both projects focus on the Riverside neighborhood, the area northwest of downtown Indianapolis and north of the expanding IUPUI campus. We begin with a discussion of the power dynamics of the collaboration and a brief introduction to the Riverside neighborhood. We then share two projects as case studies to illuminate the potential and problematics of environmental justice collaborations between a large urban university and small, non-profit advocacy organizations.

IUPUI's commitment to community engagement presumes that there is an exchange of value in community-based teaching and research. The faculty who invest in community-engaged work recognize the time and energy it takes to build relationships and trust with partners. They accept the work it takes to produce results that are accessible to community members, whether that is sharing the work in community forums or developing digital tools that expand public access to data. Community partners who enter into collaborations with IUPUI know full well

the institution's history of displacement and the asymmetry of budgets, staff, and other metrics that are typically commensurate with institutional power.

Within higher education, community-engaged projects are understood to be fraught with disparities of access, authority, and accountability. Scholars studying community engagement have mapped the exchange values on trajectories of transactional to transformative (Bingle, Clayton, and Price 2009; Dumlaio 2018) and debated the merits of tactical versus strategic partnerships (Feigenbaum 2010– 2011, Mathieu 2005, 2012, Parks 2009). Rachael Shah has proposed a conceptual framework of “critical community-based epistemologies” which posits that “community partners are holders and producers of powerful knowledge, and these knowledges can be invaluable in shaping engagement collaborations.” (Shah 2020: 107). She argues that this epistemology should both inform the “ethical vision that acknowledges the importance of community member voices, perspectives, and priorities” (109) and the power dynamics so that community partners can hold universities accountable. For IUPUI faculty, the value of community expertise is not only a fundamental principle, but a powerful driver of our motivations. Community partners' expertise and lived experience are a foundational knowledge base. At the same time, course-based projects

Faculty and students generally approach projects through an academic lens, while for community partners the issues of environmental harm and the slow violence to their neighborhoods are lived experiences.

inherently align with university schedules, ways of working, and desired outputs and outcomes. They are, therefore, often not in sync with community partners' many obligations, priorities, ways of knowing and working. At a pragmatic level, faculty are paid to teach and do research, and it is both expected and in our professional interest to produce scholarship about our work (such as this article). For community partners, the time to meet, write, edit, and respond to requests for information is unpaid labor that comes on top of the already heavy loads of frontline community development, advocacy, and social justice work.

There is often an asymmetry or divergence at an emotional level as well. Faculty and students generally approach projects through an academic lens, while for community partners the issues of environmental harm and the slow violence to their neighborhoods are lived experiences. They are a part of generations of racialized environmental trauma, and the impact to their communities' social, physical, and financial health is personal. Finally, the difference is also often about epistemology, paradigms, and assumptions. The university-trained faculty and students are prepared to frame a problem (hopefully one that is relevant to the community), design a methodology, collect data, analyze the data, and share the results. While that research paradigm has its merits, it also frames the entire enterprise in terms of a problem. It leaves little room to celebrate community agency, resilience, and creative problem solving. It often also leaves little space for deep listening to understand the concerns and perspectives, the joys and curiosities, the hopes and fears of community members. The objectivity and rationality that is the scholarly mode of being can be crippling in a project that hinges on building empathy and centering community voices. It also often privileges the observable, material, and tangible, and fails to account for the intangible heritage of lived

experiences and oral traditions. It often focuses on objects and outputs, and fails to attend to the relationships and social capital that are central concerns of the community.

RIVERSIDE NEIGHBORHOOD

The Riverside neighborhood is on the Near Westside of Indianapolis bounded on the north by 30th Street and the south by 16th Street, to the west by the White River and to the east by West Street/MLK. It has many attractive features including Riverside Park (Fig. 1), historic architecture, and a landscape design plan dating to the early 20th century in keeping with the City Beautiful urban planning principles.

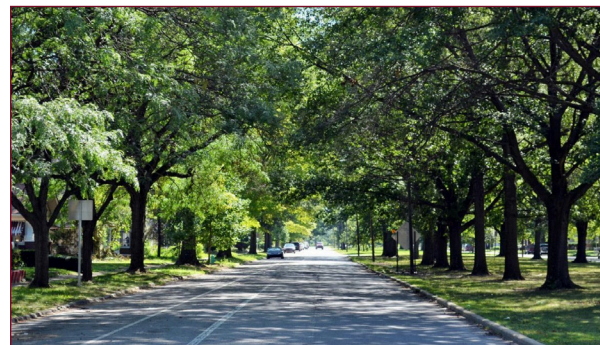
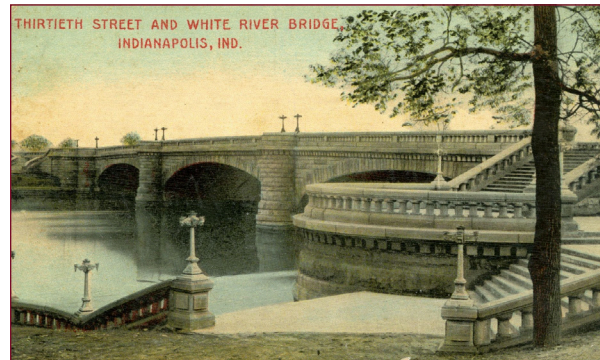


Fig. 2. Burdsal Parkway Photo by Marc Ancel, 2017, courtesy of The Cultural Landscape Foundation **Fig. 1. Postcard view of the 30th Street bridge over the White River and part of the Riverside Park landscape design** Courtesy of E. Kryder-Reid

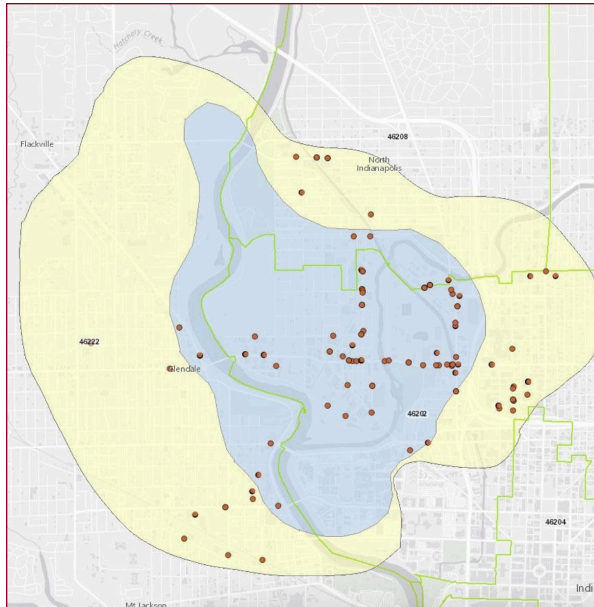


Fig. 3. Map of Site 0153 showing locations of potential responsible parties for the source of the groundwater contamination Courtesy of IDEM

Portions of the design, including Burdsal Parkway (Fig. 2), a wide east-west boulevard designed by George E. Kessler (1909) with a central median planted with grass and mature shade trees, contribute to the Riverside Drive Historic District. While primarily residential with a long-standing African-American community, the neighborhood also has a history of industrial and commercial sites, particularly along the Central Canal and the southeast area along 16th Street and Montcalm. The combination of industrial sites, dry cleaners, gas stations, the railroad, and the I65 Interstate (completed in 1976) have created a superfund-eligible groundwater contamination site (Site 0153), and left a legacy of environmental burdens that current residents now bear (Fig. 3).

Running the gamut from groundwater contamination in subsurface waters to lead in soils and dust and paint to air pollution from highways and industry, these environmental insults harm

the physical, mental, and economic well-being of the community. The community has also faced an information gap where data was scarce, hard to locate, and sometimes wrong. Activists have long worked to improve the quality of life in the neighborhood, but faced barriers in the form of policies (e.g. Red Lining (Fig. 4), zoning variances, disinvestment in public services such as street lights and sidewalks) and practices (e.g. absentee landlords, illegal dumping) (Schwier and Elliott 2014). Features such as the Central Canal that were developed into recreational amenities in other parts of the city were in the Riverside neighborhood minimally maintained or restricted from use by residents.

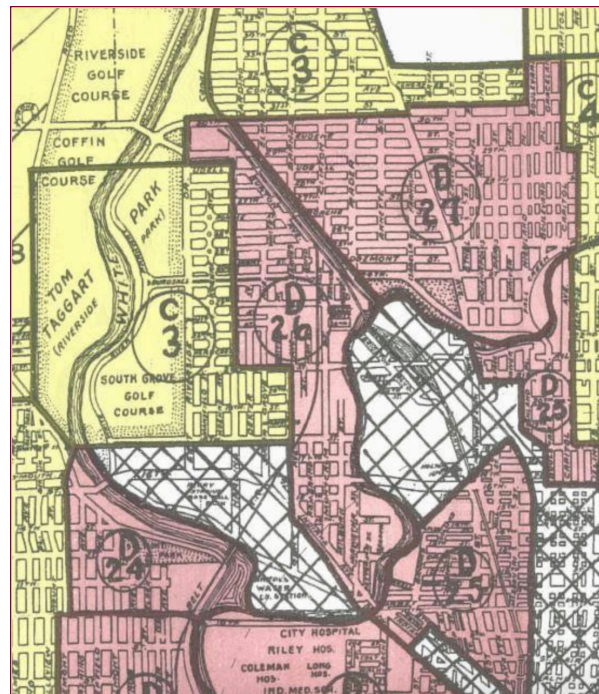


Fig. 4. Riverside Neighborhood, detail of the 1937 Home Owners Loan Corporation (HOLC) map indicating in red the areas that were at “high risk” for loans based on the residents’ demographics and excluding areas with African-Americans from eligibility for government loans.

PROJECTS

In the face of these challenges, IUPUI faculty, students, and community members have partnered on multiple projects to document the history of environmental harms, assess exposure and risk of residents' exposomes, share information in ways that are accessible and relevant for residents, and create public humanities projects that share the history of the area and create broader awareness of the environmental issues and the systemic environmental racism that has exacerbated them. The work supports the agency and activism of the community members, particularly as they face pressures of gentrification and university encroachment with the planned 16 Tech project expansion. We share two of these projects as case studies to offer insights into community-collaborative environmental justice research.

Case Study 1: Lead Exposure

The Center for Urban Health at IUPUI has a long history of conducting community-driven work in identifying and eradicating sources of the harmful toxin lead in the environment, and thus improving community health. This work has largely focused on soil-based risks, as much of the lead used in the 20th century in leaded gasoline, lead-based paints, and emitted from industrial sources accumulated and concentrated in surface soils. More recently, the Center has built on the citizen-science approaches, in which data is collected by members of the public, by adding indoor dust measurements to its toolkit of exposure monitoring resources, and in 2021 added indoor tap water as another indicator. Collectively the science, educational, and outreach aspects of these efforts have been captured in the global citizen-science platform www.MapMyEnvironment.com. This resource is a “one-stop shop” for exploring community-based work on the human environmental exposome, and is meant to be adaptable and scale-able to continue

adding new functions and layers as more results and more indicators come into play.

Barriers to participation in such a program includes (1) a community member's knowledge of this resource, (2) overcoming the “participation cost” which often includes materials and postage, and (3) concerns about liability and anonymity of home-based environmental data. To overcome some of those barriers, the Center for Urban Health partnered with the IUPUI Arts and Humanities Institute (IAHI) and a local collaboration of congregations under the Ministerium to conduct a unique and highly geographically focused project to educate on hazards, distribute and collect kits from participants, and deliver results back to participants in an anonymous manner. In this current partnership, the Ministerium plays a central role as the public face of the program, and the university partners play the role of kit development, analytical services, and research translation.

This “community-forward” approach was successfully carried out in an earlier partnership between the Center for Urban Health and Groundwork Indy, focusing on soil lead hazards in the Riverside neighborhood of Indianapolis. This partnership involved the Center for Urban Health augmenting the normal youth leadership development programs at Groundwork by funding several additional youth as “Environmental Justice Fellows” and educating a cohort of the students as lead experts. This involved providing some background information about lead and lead in their community, introducing them to the university and the laboratory where the analyses would be conducted, an eye-opening experience for those who had not set foot on a college campus before. The cohort also gathered to discuss how they were going to implement detailed soil sampling efforts. The youth then became the leads



Fig. 5, 6. Youth members of the Keep Indianapolis Beautiful Green Tree Team and IUPUI students sampling soils at the JVT Park in the Martindale-Brightwood neighborhood of Indianapolis for lead analysis.

of the program, discussing with residents what they were trying to do, conducting sampling of occupied and vacant properties, collecting the samples centrally, and then translating-relaying results back to occupants and answering questions (Figs. 5, 6). Groundwork Indy executive director Phyllis Boyd explained that part of the goal for the youth participants is to help them see themselves as agents of change. Working as part of the “Green Team” engages them “in the process of how you think and dream about spaces and how you can change them ... so they get to see the whole arc of how you as a person can do stuff in the world” (Boyd quoted in Yousry 2021).

Two revelations emerged from this program, exemplifying the importance of community participants having leadership and agency in citizen science projects. The first involved recruitment. Many residents were wary of anyone knocking on their door and asking about their property, as they had been victims of predatory real estate agents and other unsolicited visitors. The

youth decided it was going to be more efficient to make a door hanger explaining the program and providing a contact number for the residents to call should they want to participate. The youth then went to those homes wearing Groundwork Indy shirts and a program badge, and had few problems with the sampling.

Many residents were wary of anyone knocking on their door and asking about their property, as they had been victims of predatory real estate agents and other unsolicited visitors. The youth decided it was going to be more efficient to make a door hanger explaining the program and providing a contact number for the residents to call should they want to participate.

The second revelation involved unlicensed day care settings. In some of the introductory discussions, Center for Urban Health staff noted that many of the residents would likely have high soil lead values, and given the risk to children of lead poisoning, that day care centers were a particular concern. But because many day care centers in the area were unlicensed, they did not have soil lead testing and thus could pose risks to the children. Furthermore, Center staff noted that soil lead was typically a very easy problem to solve if you know it's an issue, as an intervention as simple as adding a thick layer of mulch solves the soil exposure problem immediately. The youth took these kernels of information, and, unbeknownst to Center staff, devised an incredibly creative solution. Groundwork had trucks and the ability to provide free mulch, so the youth held beautification days, where they approached the day cares and offered to do landscaping, including adding thick mulch in and around outdoor playgrounds. All of the day cares approached were thrilled about this, and the youth coordinated the “capping and covering” of properties, without even mentioning the word “lead” to the day care facilities. In a perfect world, the facilities would be aware of and have already protected children in their care from lead exposure, but in a practical world the Groundwork youth managed an intervention that Center for Urban Health staff never would have considered, given their focus on the science side of the problem rather than the solutions side.

Case Study 2: Climates of Inequality

From 2017-2021 IUPUI faculty and students in Museum Studies and Public History, along with Kheprw Institute (KI) and other community partners, had a remarkable opportunity to collaborate on a project focused on environmental justice in Indianapolis' urban core.¹ Together, we investigated the history of the city's public waterways to develop a range of environmental humanities projects designed to engage broad publics in the history of environmental harm and its effects on the cities' neighborhoods, particularly communities of color and lower socio-economic status. In three classes over three semesters, students worked with KI to develop research briefs, exhibits, digital humanities projects, social media, and public programs. (Climates of Inequality; Indy Environmental Justice History, Indy Environmental Justice History Facebook page, Toxic Heritage - Climates of Inequality project). KI team members were an integral part of the project (Fig. 7).



Fig. 7. IUPUI students, faculty, and KI leaders meet at KI in Fall 2018 for a conversation about KI's environmental justice work and the principles of Just Transition.

¹ Kheprw Institute (KI) is a nonprofit organization focused on empowering youth and building community wealth in Indianapolis. Since 2003, KI has worked to create a more just, equitable, human-centered world by nurturing youth and young adults to be leaders, critical thinkers and doers who see the people in any community as the most valuable assets and are committed to working with disinvested communities to bring about change that leads to empowered self-reliant and self-determining communities. For a more complete discussion of the COI project, see Kryder-Reid, Holzman, Nadaraj, and Humphrey, in press.



Fig. 8. Community members gathered at KI to see the presentation of the *Climates of Inequality* digital humanities projects developed by IUPUI students in Fall 2018.

They attended most of the classes, served as EJ subject experts, hosted community conversations, and led classes introducing students to the principles of Just Transition (Climate Justice Alliance 2016). They critiqued students' presentations of their research and project concepts, and they coached the students on engaging community organizations. They helped students identify people in the community to approach as informants and they filmed oral histories. KI also helped promote the public humanities projects by hosting a showcase of the digital humanities projects in 2018 (Fig. 8), promoting public programs, and speaking at the *Climates of Inequality* exhibit opening celebration (Fig. 9).

The project exemplifies some of the benefits and challenges of community-engaged teaching and research, particularly when focusing on issues of environmental justice. From the students' perspective, the learning experience was powerful

because they were co-curating narratives with partners from KI and developing public-facing interpretive projects that spoke to pressing social issues.



Fig. 9. Aghilah Nadaraj and Leah Humphrey speak at the opening of the *Climates of Inequality* exhibit at the Central Library, January 2020.

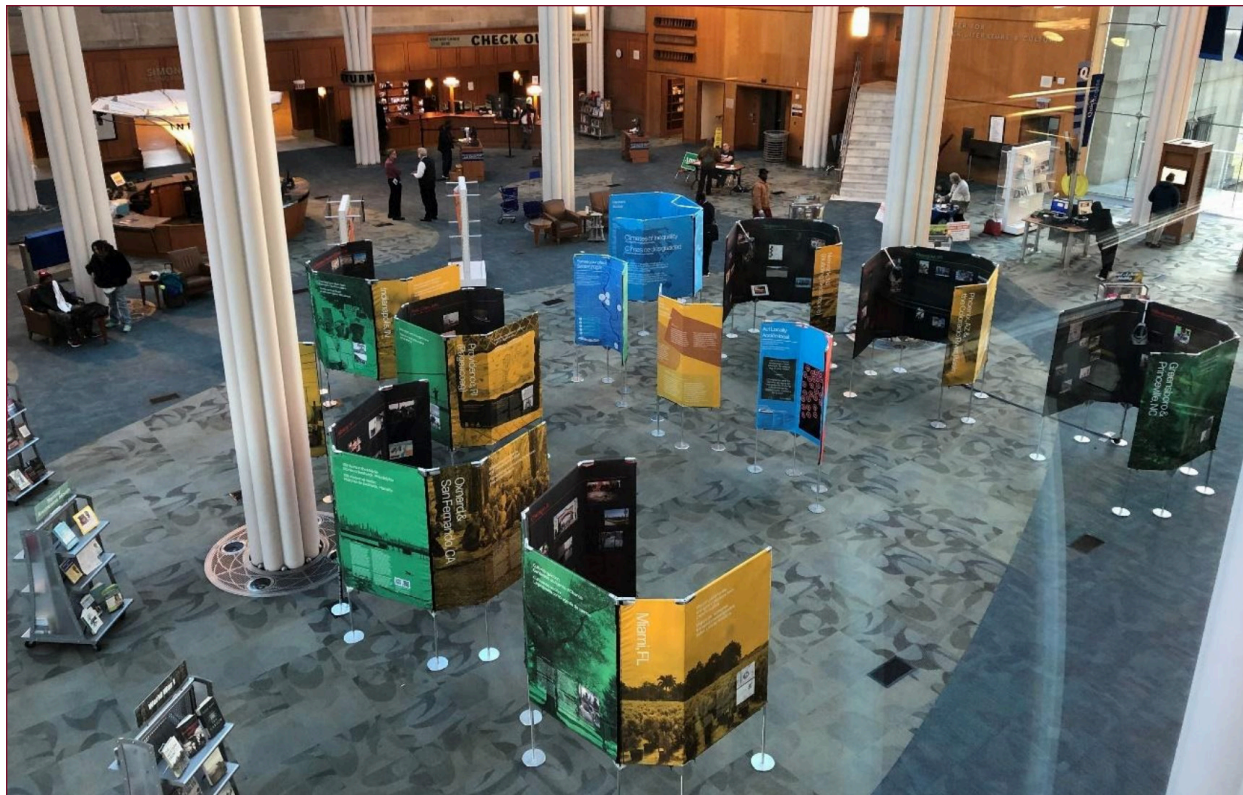


Fig. 10. Climates of Inequality exhibit, IMCPL Central Library, January 2020

A student wrote that she was excited “to see the project go from research to planning to finally executionThe [exhibit] opening event allows us to see the interest that people have in this topic and that we are connecting with people and raising concerns through this work” (Fig. 10).

Students also appreciated making connections between the issues of environmental justice and their own lived experiences. For example, one student reflected,

"I've lived in the Indianapolis community for the past five years and prior to this course I can say I knew nothing of its history and issues. It made me recognize that it's important to really learn about where you reside and call home and to not be a robot who drives by Fall Creek Parkway every Saturday and Sunday but doesn't exert the effort it takes into finding out why it smells so horrible."

Other students valued the opportunity to build relationships with the KI team and other community leaders (Fig. 11), gain experience in community-focused collaborative projects, and build skills in public humanities practices (e.g. exhibit development, public programming, digital humanities).

At the same time, the ambitious scope and complexity of the project that was valued by some students was also problematic for many others

Museum Studies students had read deeply about museum history and its fraught legacy of exploitation and appropriation. They had read about decolonization (Lonetree 2012) and shared authority (Adair, Filene and Koloski 2011). Many had participated in projects that seek to address those histories of harm and are committed to the goals of partnerships that are not



Fig. 11. Students in the research seminar tour Fall Creek with Mapleton Fall Creek Development Corporation CEO Leigh Riley Evans and Destination Fall Creek advocate Doug Day, Fall 2018.

merely transactional, but have the potential to be transformative. The gap between those goals and the realities of working on a course-based project for a semester were deeply troubling for some students.

Reflecting on the experience of working with the Kheprw Institute to investigate the history of Indianapolis' urban waterways through an environmental justice lens, some students wrote about their positive experiences as they learned, many for the first time, about the history of environmental harm and its disproportionate impact on communities of color. Others offered more problematic accounts of their experiences, particularly their discomfort with the perceived power dynamics of the university-community collaboration and their own positionality of privilege as graduate students and, in most cases, as white people.

- *"I think that we did not address some ethical concerns with this project including coming off as a university trying to be 'white saviors' for the community."*

- *"I found it difficult to reconcile with feeling like I was part of an exploitative university process that collaborates with marginalized community and then leaves. I did my best to get to know the KI members as individuals by meeting with them outside of class and attending their Facebook Live events. I often felt guilty during class when people, including myself, expressed uninformed views or made ignorant statements. I struggled to move past the feelings of guilt I had about how ignorant I am to the injustices marginalized communities experience and how I never felt like I had enough time to build deep relationships with community members."*
- *"It was also difficult to find community members even willing to communicate or share their experiences.... I do not blame the community for not wanting to work with students from an institution that has a harmful local legacy, but it was still frustrating nonetheless because I felt as though much of the content in the projects I was working on came too much from my 'outsider' perspective, and didn't include enough authentic community stories and perspectives."*
- *"Dialogue is important for me, because I hold collaboration, not consultation as an ethical standard for my curatorial practice when interpreting a community's experience. However, this ethical standard was difficult to adhere to with our single-semester time constraint and I do not feel that we were able to incorporate our community partner enough.... For me balancing my own ethics with expectations was the most challenging part of this course. I did not want to approach this project with a "white savior" lens or by dominating the narrative with my own authority and position of power."*



Fig. 12. Students learn about the Central Canal and the Riverside neighborhood on a walking tour led by Groundwork Indy Executive Director, Phyllis Boyd, Fall 2018. **Fig. 13.** “Parachuting into Environmental Justice,” (top left) a public program developed by IUPUI Museum Studies students Hadia Shaikh and Sarah Shorter at Big Car Collaborative, January, 2020.

As painful as these comments were to read, these students' reflections name many of the issues central to community-university collaborations and called into stark relief the difficulty of changing attitudes, let alone structures of power, through course-based experiences. Some students were inspired, but many were also discomforted or even paralyzed with their own privilege that they felt disqualified them from engaging in meaningful ways with community members or feeling like voyeurs on walking tours through affected communities (Fig. 12). The experience left many of the students with troubling questions about the possibilities of environmental humanities to affect real and lasting change.

In spite of these concerns, for some Museum Studies students, the project helped to shape their professional values in ways that may inform their entire careers. One student commented in a self-reflective essay, "I want my own professional work to be centered around community and making museums into places for community to be seen and heard." Another wrote that "I learned that true community collaboration means privileging your partner's voice and that museum professionals must act as an avenue to amplify that voice to new audiences....I am not always the content expert and ...I must defer to community voices to properly tell stories of social injustices....collaborative projects with community must be equitable and benefit the community partners as much as the museum" (Figs. 13, 14).

Another student wrote, "One of the most valuable parts of the class was the opportunity to grow my community collaboration skills including deep listening, active engagement, and genuine commitment. These skills will be foundational for my professional practice when I get a museum job."

For the community partners, particularly KI, the project produced historical and contemporary data as well as narratives that continue to benefit KI's work as they develop curriculum, provide context of current environmental harm, and curate other storytelling projects. The companion exhibit at the Central Library featured a spotlight on KI's work on environmental justice and two KI members spoke compellingly at the exhibit opening. These opportunities helped to raise awareness of KI's longstanding advocacy for community well-being.



Fig. 14. "Follow the Fall Creek Flow" (left) public program developed by IUPUI Museum Studies student Megan Perry at Fort Benjamin Harrison Park, January, 2020.

Furthermore, the project created opportunities for KI youth leaders to gain professional experience both in collaborating with the students and faculty and in participating in the Humanities Action Lab convenings at Newark University, Rutgers (Fig. 15).

In addition to the students' learning outcomes and the benefits for the Kheprw Institute, the project has also spurred additional research. IUPUI faculty collaborated on an IAHI-funded project exploring the "Social and Environmental History of Dry Cleaning," and the preliminary results have been disseminated in "Dirty Laundry" a fifteen-tweet Twitter thread (Kryder-Reid 2020) and "Environment and Race" a Story Map (Kryder-Reid et al.). Elizabeth Kryder-Reid and Paula

Brooks, Environmental Justice Coordinator with the Hoosier Environmental Council, also presented a poster at the Society of Architectural Historians annual conference (and subsequently developed as a StoryMap) interrogating the persistence of environmental racism in Indianapolis. It drew parallels between the policies and discourse surrounding the construction of the combined sewer overflow system (CSOs) in the early 20th century and the site in the Riverside neighborhood proposed in 2018 to process gravel from the excavations for the replacement to the CSOs.

Working with Ms. Brooks and other community partners on these research projects has raised concerns similar to those expressed by students in the *Climates of Inequality* courses. While there



Fig. 15. Dr. Laura Holzman (IUPUI), Alisha Baginski (IUPUI), and Keenan Rhodes (Kheprw Institute) (right) attend the convening and exhibit opening of *Climates of Inequality* at Rutgers, Newark, October 2019.

was benefit in conducting historical research and disseminating the results, it didn't minimize the University's past and ongoing harm related to the establishment of the IUPUI campus, the expansion into nearby neighborhoods, and the current development of Indiana Avenue and 16 Tech (Paschall 2020). In this time of racial reckoning, the University has made some gestures of atonement in the form of scholarships for displaced residents. Ms. Brooks, a third-generation resident of the adjoining Near Westside neighborhood most impacted by the university expansion, pointed out, however, that there was no apparent input from the people or the neighbors who were harmed. Despite the good intentions of such initiatives, the University has continued investing directly in development that is compounding the problematic impact on historical residents of the Near Westside, namely hostile architecture, disrupted connectivity, dangerous sidewalks and crossings, and increased traffic with its higher airborne particulate pollution as well as congestion and parking issues.

The project raised significant questions for faculty roles in community-engaged environmental justice work as well. In a conversation among the authors about the complex and often contested power dynamics of university-community collaborations, a community partner referred to the "four horsemen of gentrification." Although seemingly flip, the comment called into question the roles the faculty were playing in these community collaborations focused on environmental justice. Were faculty complicit in the displacement and gentrification that communities were battling, despite the best intentioned citizen-science and purportedly activist scholarship? Were faculty merely documenting the historical and contemporary harm of environmental racism, inequity, and injustice, or were they working toward reparative and restorative justice? Or more troubling, by training a scholarly lens on

environmental justice issues were faculty mounting one of the horsemen of gentrification, along with urban planners and landscape architects, to create an intellectually cohesive but aestheticized narrative that continued to marginalize or erase the real concerns of residents? How were faculty acknowledging the responsible people and institutions, along with the systemic forces that created the conditions, including the role of the University? Were faculty just narrating the history, or taking action to address the harm and create real, enduring change? There are no simple answers, and faculty and students must continue to bring critical and self-reflective lenses to this work (Shah 2020, Warren-Gordon 2021).

Reflections on Community Engaged EJ Research and Teaching

These two case studies exemplify the value of a multi-year projects with long-term shared institutional goals, the value of collaborative research shared in accessible formats, and the potential for using the city as an environmental justice classroom. Proponents of engaged teaching have suggested that long term partnerships can be more manageable and rewarding than short-term collaborations (ex. Jay 2012) and in ways that allow for not just tactical, but strategic goals (Feigenbaum 2010– 2011, Mathieu 2005, 2012, Parks 2009). The COI project, which has taken four years including planning and dissemination, demonstrates both the results of a longer-term partnership and the challenges of spanning multiple courses and a changing cohorts of students.

The COI project in particular revealed the importance of process and structure for ensuring successful student learning outcomes and community partner satisfaction. In many ways these findings are most powerfully highlighted in the project's shortcomings. Rachael Shah's Rewrit-

ing partnerships: community perspectives on community-based learning (2020) was published too late to inform the COI project, but it contains several concepts and resources that may be useful in future community engaged courses. The importance of self-reflection is well documented as a high impact practice, but assigning a weekly journal entry and requiring a final essay was clearly not sufficient to support some students' struggles to situate themselves in the project and its larger context of environmental justice. Shah offers an "openness heuristic" which asks students to write a definition, provide 4 concrete examples, and offer a self-reflection on each of the 4 dimensions of openness she lays out in the "Openness: Community Members Who Work with Graduate Students" chapter: open minds, open construction of self, open construction of others, and open hearts (Shah 2020: 149-151). She also provides "community grading sheets" with a feedback form so that community partners can give feedback about their experiences working with college students. These tools will be valuable in future community-engaged pedagogy. Perhaps most significant finding for informing future community engaged projects is Shah's concept of critical community-based epistemologies, or ways of knowing, which posits that "community partners are holders and producers of powerful knowledge, and these knowledges can be invaluable in shaping engagement collaborations." (Shah 2020: 107). She argues that this epistemology should both inform the "ethical vision that acknowledges the importance of community member voices, perspectives, and priorities" (109) and the power dynamics so that community partners can hold universities accountable.

Looking forward, there are lessons for future university-community collaborations on environmental justice issues. The university as an institution has a specific positionality, historically and in contemporary power dynamics, but faculty can

work in a somewhat different space. Their stakes in the documentation of environmental risks are distinct from corporate and governmental entities, and as such may provide more trusted results than those who rely on the data for profit motives. The university side of the collaboration brings, therefore, the possibility of a counternarrative to the received versions promulgated by government agencies, developers, and industrial representatives. If built on trusted, authentic relationships, these collaborations can also help to amplify the narratives of community perspectives and experiences, but building those relationships is not easy, particularly with the shadow of the university's past and ongoing community harm. The enduring outcomes are also in question. Clearly the intent of those involved is to work for social good, but the actual results are more ambiguous. As Dan Butin and Daniyal Saud wrote in 2013, "what higher education can accomplish through community engagement is an open question rather than an obvious answer.... until and unless we carefully push back on what it is that community engagement can do, there may be little to celebrate a generation from now." (93) For those working for and with IUPUI, the goals of particular community-engaged projects have to be weighed against the broader institutional agendas and actions of the institution, and that balance is precarious at best. In spite of these enduring structural inequalities, the people involved in these projects remain committed to the goals of environmental justice work and to the benefits of community engagement and collaboration. We take inspiration from reflections such as the student who wrote about participating in *Climates of Inequality*, "[it] made me feel that through the completion of this project, I have actually done something that has made a difference in the world."

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City Care

Historical and Contemporary Lessons from Environmental Justice Coalition-Building

ELIZABETH GRENNAN BROWNING

ABSTRACT

This article examines the historical roots of the challenges facing contemporary climate justice advocacy campaigns, and draws lessons from this history regarding how to more comprehensively address racial equity in resilience planning and environmentalist advocacy. As the modern US environmental movement gained momentum in the 1970s, fault lines developed between environmentalists and civil rights advocates. A key source of tension was debates over whether urban environments were deserving of the same kinds of environmental protections as more traditional and pristine forms of “nature.” African Americans’ prioritization of economic equity alongside legal equality also led to a critical dialogue about economic growth and the economic externalities of regulating industry and safeguarding the environment. This article draws on environmental justice and environmental history scholarship as integrated lenses for analyzing racialized debates during the early years of the modern American environmental movement.

I trace how public deliberations played out regarding the first Earth Day in 1970, and the City Care Conference of 1979—the first national conference that brought together major environmental groups such as the Sierra Club and civil rights organizations such as the National Urban League to deliberate the linkages between racial equity and environmentalism. Finally, I connect these historical analyses to recent data from the Indiana University Environmental Resilience Institute’s Hoosier Life Survey in order to better understand contemporary racialized disparities of climate change vulnerability, and relatedly, of climate change opinion.

KEY WORDS

- environmental justice
- environmental racism
- civil rights
- US environmental movement
- coalition-building
- vulnerability
- climate change opinion

Author

ELIZABETH GRENNAN BROWNING

IU Environmental Resilience Institute

IU Bloomington
Department of History

Research Fellow at the
IU Environmental Resilience Institute

Adjunct Assistant
Professor in the IU
Bloomington
Department of History

Over the course of the past year, Black and Brown communities have experienced disproportionate burdens from the health and economic effects of the global coronavirus pandemic, and the national pandemic of police brutality. Now perhaps more than ever in our lifetimes, we have seen the contours of structural racism rise violently to the surface. These intertwined crises have led to a moment of racial reckoning, of accounting for the long-standing effects of racial inequality in our communities, and how we discuss these issues in our public forums and teach about them in our schools. By structural racism, I mean to recognize how both white privilege and racial oppression against BIPOC communities manifest not just in individuals' behaviors, but in our public policies and our public infrastructure, broadly defined—from access to quality education, clean water, uncontaminated environments, and safe housing that protects families from the hazards born of anthropogenic climate change, including extreme heat and flooding.

Environmental justice scholarship offers a comprehensive, holistic view of the many layers of racialized injustices that plague communities of color. (Sze 2020). These environmental and public health problems did not emerge in situ, but rather bear the mark of historical legacies of public policies and practices that facilitated unequal treatment, including Jim Crow segregation laws, restrictive covenants, racial zoning, redlining, and the use of eminent domain in urban renewal measures (Pulido 2017). Climate justice advocates must examine the history of coalition-building between civil rights and environmental organizations to better understand our current challenges and devise more effective agendas and strategies for creating just and resilient communities.

In this article, I analyze coalition-building between

civil rights activists and environmentalists during the 1970s, as the modern environmental movement gained momentum in the United States. The 1979 “City Care” national conference is an especially important benchmark to measure both the progress and continuing challenges of environmental justice movements in the United States. I then draw on data from the recent Indiana University Hoosier Life Survey (conducted by a team of social scientists in 2019 to better understand Hoosiers' opinions about climate change, mitigation, and adaptation) in order to underscore the importance of approaching climate change resilience practices from a lens of racial equity.

City Care, 1979: Coalition-Building Among Civil Rights and Environmental Advocates

The origins of the modern environmental movement are clear from examining the roots of the first Earth Day on April 22, 1970. Senator Gaylord Nelson of Wisconsin was the main force in bringing the national teach-in together, but his success was only made possible from the broader national cultural and political context at the time. Rachel Carson's publication of *Silent Spring* in 1962 had stirred a widespread sense of concern about the post-World War II chemical regime and its effects on wildlife and habitats. An acute precursor to Earth Day's activism was a set of environmental disasters in 1969: first, a major oil spill off the coast of Santa Barbara in January, and second, the polluted Cuyahoga River in Cleveland catching fire in June. Growing concern about pollution and biodiversity loss led to a bipartisan commitment to environmental protection, with Republican President Richard Nixon signing major pieces of environmental legislation in the early 1970s, including the National Environmental

Policy Act, and the creation of the Environmental Protection Agency (Rome 2013).

However, as the environmental movement got under way, fault lines quickly formed around issues of race, class, and the dilemma of determining which environments were deserving of protections. Whitney M. Young, Jr., Executive Director of the National Urban League (a civil rights and urban advocacy organization founded in New York City in 1910), pointed to these fissures in his syndicated newspaper column several days after the first Earth Day celebration. Young explained that the recent wave of environmentalism cohered around Americans' concerns about their "quality of life." He was concerned that white people who had suddenly discovered the problem of pollution were mostly focused on improving the plight of the middle class. Noting that people living in the lily-white refuges of white flight—America's suburbs—sought to preserve their clean air and water, Young flipped the definition of pollution to emphasize Blacks' unique concerns which often went unremarked by white liberal environmentalists: "if their town is segregated, if it bars blacks from buying homes, or has zoning laws that keep low-income people out, it is polluted in a far graver sense."

Young expressed hope that the environmental campaign would succeed in cleaning up the nation's air and water, but worried that this would all just become another fad, and an additional distraction from the most important issues that American society needed to confront: racial injustice. He pointed to how the civil rights movement's white allies had become distracted by the anti-Vietnam War movement, and the campaign for campus democracy led by the Students for a Democratic Society (SDS). Environmental activists, Young argued, needed to consider the social ecology of America: "if the

relationship between men and fishes has come to be such an important topic, then surely the relationship between blacks and whites is even more pressing." He went on to explain, "We must be concerned about air pollution from auto exhausts and from factory smokestacks. But we must also be concerned with the far more insidious pollution of poverty that poisons the lives of 30 million Americans. We should be concerned about chemical deposits in the food we eat, but also about the millions of Americans who go hungry; whose diets are perched on the thin line of malnutrition" (Young 1970).

Several years after the first Earth day, in September 1973, evidence of the racialized schism in the environmental movement was again brought to the public's attention by Vernon E. Jordan, who succeeded Young as the National Urban League's Executive Director. Jordan reflected on the ten-year anniversary of what was a watershed moment for the civil rights movement—the March on Washington for Jobs and Freedom, organized by A. Philip Randolph. On August 28, 1963, the March convened a quarter of a million people at the Lincoln Memorial in Washington, DC, in a profound demonstration for equal rights. It was the highwater mark of civil rights advocacy, and helped lead to the passage of the landmark Civil Rights Act of 1964. But, as Jordan warned, the great progress that advocates had made to secure African Americans' legal rights was only a precarious

We must be concerned about air pollution from auto exhausts and from factory smokestacks. But we must also be concerned with the far more insidious pollution of poverty that poisons the lives of 30 million Americans.

victory because Blacks still did not have economic freedom, among many other persisting racial inequalities. Echoing Young's concerns from several years before, Jordan called out "the fair-weather friends who have moved on to other causes—pollution, ecology" and various other short-lived trends. Jordan implored these former allies to return to the cause of racial equality. As Blacks' civil rights continued to suffer, those who were most closely devoted to the cause of racial equality sometimes saw the environmental movement as a zero-sum game, with urban communities of color losing out. (Jordan 1973).

This persisting divide between civil rights and environmental advocates was the focus of a groundbreaking coalition-building national conference held in April 1979 titled "City Care," which brought together representatives from the National Urban League, the Sierra Club, the Urban Environment Conference and Foundation, and several federal agencies to discuss environmental health hazards facing communities of color, as well as environmentalists' expanding definition of the "environment" to account for urban spaces (EPA 1979). In describing the goals of the conference, Vernon E. Jordan, Jr. emphasized that "groups working for constructive change...in creative coalition efforts" needed to approach their collaboration from a space of mutual understanding, and that allies needed to acknowledge and respect their partners' distinctive priorities. The priorities articulated by Jordan and other civil rights advocates for the City Care conference remain relevant for today's conversations about climate justice and resilience.

- **Prioritizing Economic Equality through Job Creation.** Jordan critiqued slow- and no-growth economic theories, arguing that perhaps Blacks' only chance to gain economic parity was "through expanding the national

economy and getting a bigger slice of that growth." He offered solar energy as an example of a successful story of uniting environmentally sustainability with economic opportunity and job creation for the urban poor.

- **Ensuring Racial Equity in Environmental Regulations.** Jordan criticized political demands to curtail federal oversight of environmental regulations, reminding his audience that Black neighborhoods were "most affected by pollution," and Black workers were "of-ten locked into the most hazardous jobs that are most liable to result in health and safety risks." The notion of "environment" needed to expand, Jordan argued, to account for "all external factors affecting people—economic and social, as well as physical." Creating a more sustainable environment needed to include finding solutions for poverty, unemployment, and unsanitary housing conditions in American cities.
- **Cleaning up environmental toxins and contaminants in minority neighborhoods.** Jordan identified children's lead contamination from polluted air and auto exhaust as a uniquely urgent concern for low-income neighborhoods. As the City Care Conference was under way in Detroit, the Three Mile Island nuclear accident occurred near Harrisburg, Pennsylvania, spurring skepticism about nuclear energy among environmentalists gathered at the conference. Jordan suggested that nuclear energy was not the best path forward because of the potential disproportionate health impacts that it presented for poor communities.
- **Fighting for Energy Justice.** Jordan underscored the inequities of the nation's energy consumption patterns: "Poor people use less energy but spend more of their incomes for it."

The spiraling cost of utilities exacerbated the economic vulnerability of low-income minorities, and degraded their quality of life as well as their physical safety. Jordan identified energy justice as “an issue this emerging coalition can run with,” and a “key test of whether the concerned groups can move beyond rhetoric to effective advocacy for the urban poor.”

Jordan’s key takeaways from the City Care conference remain front and center in today’s climate justice activism. In fact, they map directly onto the NAACP’s contemporary Environment & Climate Justice Program’s main objectives: reducing harmful emissions, advancing energy efficiency and clean energy, and strengthening community resistance and livability (NAACP 2021). As we’ve seen over the past few years, the environmental movement has increasingly reckoned with its history of racism, including mainstream organizations’ neglect of environmental justice issues and exclusion of marginalized minorities. (Finney 2014, Taylor 2016). We have begun to witness some small degrees of change. For example, the Sierra Club elected the first African American president of the organization—Aaron Mair in 2015—and in 2020, the first Latinx president, Ramon Cruz. However, there is clearly still much work to be done to ensure that voices from low-income communities of color are represented in environmental organizations’ and government agencies’ leadership ranks. Nonwhite researchers, naturalists, and outdoor enthusiasts have been critical to disrupting stereotypes within environmental research and activism and to ensuring that BIPOC researchers lend their expertise to public policy (Thompson 2020). New appointees in the Biden Administration, including Shalanda Baker as Director of the Office of Minority Economic Impact in the Department of Energy, recognize that the energy system operates with racial

disparities across the board, from the economic impact of utilities pricing to pollution from energy production and waste. (Baker 2021). We must approach resilience planning in all its facets with a critical reflexivity that keeps us attuned to the question of “resilience for whom?”—which will remind us to prioritize fairness, environmental justice, and equitable access to resources. (Cutter 2016).

Former Sierra Club president Aaron Mair pointed to Wendell Berry’s 1989 book *The Hidden Wound* as a valuable resource for reflecting upon how America’s democratic institutions and social organization have resulted in the unintended degradation of both the environment and humanity, and the importance of focusing on the intersection of race and environmentalism. When Berry started writing this book in 1968 during the civil rights movement, he said he was trying to understand his own identity with respect to the “crisis of racial awareness.” Berry’s book attempted to allow him to reckon with his ancestors’ history as slaveholders, with Berry’s own personal history growing up on a farm in the segregated South, where he developed a commitment to environmentalism. In doing so, he links racism and environmental degradation: “the psychic wound of racism has resulted inevitably in wounds in the land, the country itself.” (Berry 1970).

Hoosier Life Survey Findings: Climate Justice in Indiana

For over a century, the Midwest—and Indiana in particular—has been mythologized in the popular imagination in the United States and beyond as the “heartland” of the country, a quintessentially American place, where rural and small-town values have long abided, and the nation’s so-called core identity appears intact and pristine. If we look closer, however, we see that this idea of a pristine, isolated, heartland is a myth. (Hoganson 2019).

Even with the understanding that this cultural construct of the Midwest has never been true—and that the Midwest has always been deeply interconnected with a global network of places—it is important to recognize that this mythology is still very important, because it affects how people think about this region, and how residents understand their communities and their own identities. The longstanding heartland imagery is especially poignant when it comes to understanding Midwesterners' climate change beliefs. While many onlookers, and even Midwesterners themselves, invoke the idea of a flyover country with an inordinate amount of skepticism about the scientific consensus surrounding anthropogenic climate change, social science research has helped upend this narrative, and reveal that Midwesterners are a much more diverse lot than we generally assume.

In late 2019, Indiana University's Environmental Resilience Institute conducted the Hoosier Life Survey to help Indiana's policymakers and citizens better understand how Hoosiers think and learn about climate issues, what steps they are taking to mitigate climate change risk, and what tools they would like to better adapt to the effects of climate change in the future. The survey had nearly 3,000 responses (a response rate of 29.4%), and represented a cross-section of the state, with responses from 90 of Indiana's 92 counties. (Houser and Sandweiss, et al. 2020). The survey design deliberately oversampled for members of racial minority groups to ensure that their viewpoints were represented in the data.

Lower-income households and communities of color face higher environmental risks from pollution and toxins, and these disproportionate burdens are also felt when it comes to climate change impacts, including extreme weather events such as heat waves and flooding because

The environmental movement has increasingly reckoned with its history of racism, including mainstream organizations' neglect of environmental justice issues and exclusion of marginalized minorities.

these populations do not have the resources to adapt their lifestyles or homes to mitigate these risks. And these factors then snowball into other adverse health effects—including Covid-19's disproportionate rates of infection and death among people of color. The Hoosier Life Survey has provided important insights into how the social variables of race and economic status (among others) affect Hoosiers' personal experiences of climate change impacts, and their perceptions of climate risks. A majority of Hoosiers think climate change is harming people in the US right now, and 69% believe climate change will hurt people in Indiana. However, respondents of color were twice as likely as white respondents to agree that climate change will harm them a great deal and 25 percent more likely to agree that climate change is harming people in the US right now. Respondents from lower-income Hoosier households were also more likely to report that they believe climate change will harm them personally a "great deal," compared to higher-income households.

These signs of higher concern about climate change also extended to questions about whether climate change is happening. Seventy-six percent of Black Hoosiers and 86 percent of non-Black people of color agree that climate change is happening compared to 72 percent of white Hoosiers. Furthermore, responses about policies to mitigate climate change impacts revealed similar patterns. African Americans are more likely to

live in urban heat islands, and thus have a more difficult time escaping extreme heat. In the survey, Black respondents were about twice as likely as white respondents to support measures that would reduce heat-wave risks, including public funding for air conditioning, health services, and text-based early warning systems during heat events. BIPOC communities' disproportionate experiences of vulnerability to the effects of climate change have in part led to both their higher rates of belief in anthropogenic climate change, and support for mitigation and adaptation policies..

CONCLUSION

The monumental challenge that lays before our collective society is coming to terms with the difficult but unavoidable reality that responding to climate change requires major societal changes—and these changes must address the historical legacies of racial inequality. It is not sufficient to say that engineering technological fixes will save us. Even more important is the need to address our social perspective, and how we interact together as a human society and with the nonhuman world.

In order to build our society's resilience to climate change, we must reconsider our social values and norms that support over-consumption and perpetuate inequalities in access to environmental goods and environmental decision-making. The fragile and yet integral coalition-building between environmentalists and civil rights activists in the 1970s reminds us that our current battles for climate justice must establish room for understanding the unequal burdens that climate change inflicts on BIPOC communities. Protecting those most vulnerable to our climate crisis requires that we first understand how we came to where we are as a nation today, and take accountability for a past that has long hindered moving forward toward a resilient future.

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More than Just an Academic Exercise

Conjoining Critical Policy Analysis and Community-Engaged Research as Embodiment of Political Action

ANJALE WELTON AND KATHERINE CUMINGS MANSFIELD

ABSTRACT

Critical policy analysis (CPA) is a means by which to critique policy and promote agency, equity, and justice. However, most CPA scholars examine political discourse from a distance rather than actively participate in political processes. Meanwhile, there is a growing interest in community-engaged research whereby academics partner with community members in their research endeavors. In this article, we consider the value of conjoining the philosophies and processes behind both CPA and community-engaged research to create more powerful and meaningful research endeavors that potentially can lead to political action and policy change. For this article, we present a subset of data from a larger study that asked education policy scholars how critical policy analysis informs their work and what they consider to be key objectives of this approach. We focus on a subsection of participants who demonstrated how and in what ways they consider community-engaged scholarship to be an essential component of CPA. Participants discussed the roles of empowerment and voice, emphasized the importance of moving from theory to action in their research, and provided examples of how they embodied policy making on the ground with participants in their communities.

[Welton, A. & Mansfield, K.C. \(2020\). More than just an academic exercise: Conjoining critical policy analysis and community-engaged research as an embodiment of political action. Educational Studies, 56 \(6\), 619-635.](#)

So what does this mean?

Critical policy analysis is a guiding framework and tool that education policy researchers can use to examine whether and how policies promote equity and justice in education. However, scholars who use this approach often conduct research on communities rather than collaborating with communities to research educational issues that directly impact them and their communities. In this article, we argue that critical approaches to conducting education policy research can and should become more community-engaged because the power of collaborative research lies in its potential to create political action and policy change.

To make our point, we present a subset of data from a larger study that asked education policy scholars how critical policy analysis informs their research and what they consider to be key objectives of this approach. We focus on this subsection of scholars who discuss how overtime, their policy research has become more community-engaged and how that has transformed not only the research process but the fruitfulness of their work. For example, participants discussed the roles of empowerment and voice, emphasized the importance of moving from theory to action in their research, and provided examples of how policy work can happen on the ground with participants in their communities.

Water is Life

Clean Water for Native American Tribes

HEATHER TANANA FOR ACADEMIC MINUTE

Water is life. Every household in America needs and is entitled to clean and safe water access. Yet, the magnitude of lack of clean water access in Indian country is significant and startling. Our report uncovers the four main factors that have exacerbated gaps in tribal drinking water access, and in turn hurt public health and economic growth:

First, Lack of piped water services—Native American households are more likely to lack piped water services than any other racial group. Navajo residents, in particular, are 67 times more likely than other Americans to live without access to running water. Hauling water is not only more expensive than piped water, but also increased the risk of exposure to COVID-19 during the pandemic.

The second component is inadequate water quality—poor quality is pervasive in Indian Country. The Hopi Tribe, which has struggled with arsenic contamination since the 1960s, estimates that approximately 75 percent of people living on Hopi land are drinking contaminated water.

Third, deteriorating or inadequate water infrastructure contributes to water insecurity —infrastructure investments haven't kept up with need, resulting in interruptions in service and potential contamination of supplies. Some tribes have water systems dating back to the late 1800s. Native Americans are one of the youngest and fastest growing populations. Yet, because of deteriorating infrastructure, Tribes are struggling to support their growing communities.

Finally, many tribes are encountering challenges in supporting operation and maintenance costs putting existing water systems at risk. Additional resources and tribal capacity are necessary to avoid future disruptions to water service in the community.

Now's the time for the federal government to keep its promises to Indian country and ensure that all Americans have access to clean, safe, and reliable drinking water.

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Authors

HEATHER TANANA
Assistant Professor
University of Utah



Influencing Environmental Policy

ABSTRACT

Cultivating relationships with policymakers about environmental issues takes time, but it can yield meaningful opportunities for policy impact. There are many key actors who have a role to play in influencing policy. Identify those individuals most relevant to the policy change you want to see and seek to influence them. Think about who supports the changes the community wants, and who might block the policies that the communities want. And just as important: who are the people who influence these key players in the policy turf? Remember that focusing on just one champion for your results in government and policy makers isn't ideal.

Another strategy is to consider the use of a wide array of tools to communicate effectively. First, humanize complex issues. Second, if you have them, use a few “killer facts.” Third, use visualizations to increase accessibility. Fourth, perfect your 30 second elevator pitch. And finally, “the messenger can be as important as the message.” It doesn't always have to be the researcher who goes out and communicates results; key allies may be better placed to deliver the word.

FRAMING YOUR MESSAGE

Questions to Consider When Preparing Your Message

What is the issue?

Are there any bills regarding this issue? If so what is the bill number?

- Are they effective?

What are some key facts of statistics regarding the issue?

Who is your audience (which people, what values?)

What information and what format works best for your audience?

- Written or verbal?
- Social media or print media?

What is your goal?

- Increase awareness?
- Generate support?
- Motivate action?

What do you want to see happen?

How does this issue impact you personally?

What is the opposite view regarding the issue?

- How would you respond?



[8 lessons on how to influence policy with evidence – from Oxfam’s experience \(worldbank.org\)](https://www.worldbank.org/)

Speaking Up and Speaking Out: Youth Voices on Environmental Justice

A discussion with two young Black men to hear their voices and concerns about justice. C.R is a sophomore attending an urban university in the Midwest and J.R is a junior attending an urban high school in the Midwest

What does justice mean to you?

C.R : Justice is a joke; it's a money and power game. The more influence you have, the more a just system will be in your favor. It means that whoever is wrong or right in the eyes of the law, of somebody else's eyes or dang near in the eyes of God can and will be seen as innocent with enough connections, money, time in a subject, or overall influence. I know it's a warped way of viewing it but I've never seen a just society outside of New Zealand, and that's a stretch.

J.R : Justice is fairness and the people should get what they deserve both good and bad. But who determines what's fair? That's the question. If you do crime then you should be punished no matter who you are.

What a young people's concerns about the future?

C.R : I'd say in terms of concerns, it's the environmental and economic situation that's been going downhill since before your generation. Since I was a kid I've heard that global warming will get to an irreversible point by 2050 and a large part of the planet will be practically uninhabitable because

of the heat and the rising sea levels (like most of California just being gone and stuff) and the prices of housing and living expenses increasing without pay increasing equally.

Most people in my generation are firmly convinced that because of large companies like the oil barons there won't be much when we "grow up" and cause of student debt or low paying jobs actually buying and paying off houses is not going to be available in our lifetime, myself included.

J.R : We are all gonna die because the generation before us are wasting everything. There's a food shortage and with no food we die. People are destroying the environment which is causing climate change and we die.

What needs to change to address environmental injustices, inequities, and inequalities?

C.R : The only major way of changing it is by doing what Europe is working on, which is going green completely or using safer forms of energy. Have the multi-billion, dollar energy and automotive industry put their profits towards renewable energy before the decade is over and going away from oil

and coal completely, or by a significantly smaller margin than where we are right now.

J.R : Our planet is dying. Our society has to change and care about people. It doesn't seem like it is getting better and it will only get better when people change.

Closing Comments?

C.R : I guess our generations are very nihilistic but for pretty real reasons. Young people are on the same page about what is happening and many are so unhappy. The standard of leadership has really dropped. Our society is morally decaying, our kids will have very little to enjoy from communal life. We cannot afford the life our parents lived.

J.R : It's just not getting better. We need good leaders to make decisions and to lead people in the right way. That doesn't seem like it's gonna happen any time soon.

Reflecting on These Youth Voices

It's obvious that our youth are angry about the lack of concern in protecting life, liberty, and the pursuit of happiness for all people. Rightfully so. Adults have made decisions that have caused so many problems. If we are going to solve problems we must include youth voice and really take the time to listen to them and understand their stories, hopes, and dreams. We, as adults, must hear youth voices and concerns without making judgements or assumptions of right or wrong.

In listening to these two young Black males about their concern about environmental injustices I realize that we cannot just put a Band-Aid on the climate justice problems because the bleeding

problems are beyond a Band-Aid. We are in a state of emergency. In emergency life or death situations, we need a tourniquet that is used to apply pressure that will stop the bleeding. Therefore, collectively, we must put pressure on decision-makers and legislators to demand a focus on ensuring the wellbeing of all people, the sustainability of the land, and equitable access to education, economic stability, and meaningful employment, so that all people, not just the wealthy elite, will benefit from a healthy livelihood. The vicious cycle of living hand to mouth must be stopped. This erosion of soil and our souls must be stopped. The only solution is to embrace life and protect the earth with life-sustaining solutions. Collaboration of the youth and the elders to share knowledge from the past and experiences of the present to create policies and practices that protect everyone from toxic environments.

Climate justice is everyone's responsibility.

Everyone must have a passion for preserving life by reducing our carbon footprints. Together, we must find solutions to save our planet and save ourselves. We must have a commitment to protect future generations. Making preventative healthy decisions must start now if we want to create a cleaner and healthier environment. Demanding leaders who are passionate about changing policies and practices to stop abuse, harm, and destruction of our environment must become our mission in life. The oppression on marginalized, underserved populations in a capitalistic economy must stop. We must stop focusing on consumption by relying on greener solutions that save lives, make changes, and ensure hope for a better tomorrow.

IUPUI

Office of Community Engagement
301 University Blvd., Suite 4008
Indianapolis, IN 46202

