"You're in a Ferrari. I'm Waiting for the Bus": Confronting Tensions in Community-University Partnerships

CELLA M. SUM, Carnegie Mellon University, USA
JIAYIN ZHI*, University of Chicago, USA
AMIL N.T. COOK, Community Forge, USA
PATRICK JAMES COOPER, Community Forge, USA
ARTURO LOZANO, Community Forge, USA
TJ JOHNSON, Community Forge, USA
JASON PEREZ, Community Forge, USA
RAYID GHANI, Carnegie Mellon University, USA
MICHAEL SKIRPAN, Carnegie Mellon University, USA and Community Forge, USA
MOTAHHARE ESLAMI, Carnegie Mellon University, USA
HONG SHEN, Carnegie Mellon University, USA
SARAH E FOX, Carnegie Mellon University, USA

There have been increasing calls within HCI to build sustained partnerships with communities that go beyond surface-level engagement. However, little is known about how communities view such partnerships and their outcomes. In collaboration with a community-based organization, we co-analyzed a series of interviews to understand the impacts of university-led research initiatives and publicly deployed technologies on local communities, and to explore strategies for more equitable community-university partnerships. Our findings reveal that local communities often perceive technology companies and academic institutions as potential threats due to their shared role in a series of projects, including predictive policing, surveillance, and broader concerns on technological bias and exclusion against minoritized groups. While interviewees named material benefits, sustained relationships, and meaningful accountability as desirable from universities, they pointed to academia's institutional priorities that pose barriers to forming effective partnerships. Drawing from la paperson's concept of a *Third University*, we argue that researchers and academic institutions must contend with these complexities, while taking a decolonizing approach to community-university partnerships through the lens of *revestment*.

CCS Concepts: • **Human-centered computing → Empirical studies in collaborative and social computing**.

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*This work was completed when author was a student at Carnegie Mellon University

1 Introduction

Cities across the United States have served as testbeds for numerous contentious technology de-
ployments — from autonomous vehicles to predictive policing — with residents too often learning
about systems only after they are in use and given little opportunity for input into their application
[14, 15, 100, 107]. In Pittsburgh, for example, state legislation backed by Amazon and FedEx legal-
izes autonomous delivery robots throughout the region, yet threatens accessibility on pedestrian
walkways and preempts local regulation [77]. Residents were neither informed about the emergent
technology nor asked for feedback prior to the bill's passage, a decision that has eroded trust in
government and led to skepticism about the utility of public technology [104, 126, 136].

Meanwhile, academic-corporate collaborations have flourished in recent decades, with universi-
ties joining forces with industrial firms to drive innovation and expand the reach of their impact.
Proponents suggest corporate engagement in research is critical if universities are to continue their
cutting-edge work, especially in light of declining financial support from the government [105, 122].
However, such collaborations have faced widespread distrust, particularly among the communities
positioned to be impacted by the technologies created through these partnerships [30, 38]. This
distrust stems from a disconnect between the incentives of research institutions, corporate actors,
and the real-world concerns and needs of communities [135].

HCI scholarship has long debated methods to empower community participation in research and
design processes [11, 76, 98]. Recent work, for example, has challenged the routinized practices of
community-based research, highlighting the tendency toward surface-level engagement and the
need for researchers to reckon with their role and responsibilities toward the communities they
study [8, 40, 62, 87]. Reporting on an effort to build a cooperatively-owned taxi business, Tandon
et al. [123] illustrate how community-led design innovation is regularly met with hostility, from
constrained access to resources, inequitable regulatory frameworks, and diminished agency in
the design and development process. Taken together, this work calls for continued scrutiny of the
institutions, policies, and practices that make up research and design innovation: it is only through
this critical attention that we can make real progress toward the fair, equitable, and community-led
initiatives we seek to support.

Recognizing the urgency of this issue, in this paper, we describe an effort to understand the
perspectives of those who live alongside experimental technologies in the city of Pittsburgh, but
who are denied meaningful access to decision-making on the terms of its deployment. Conducted
in partnership with leaders from a local community-based organization (CBO), Community Forge,
and academic researchers from Carnegie Mellon University (CMU), this study sought to understand
the impacts of publicly deployed technologies and university-led research initiatives on local
communities, and to explore strategies for more equitable community-university partnerships.
Here, we use *"publicly deployed technologies"* to refer to a wide range of systems that significantly
influence the way people experience their public lives, which include technologies that are developed
and deployed by the public sector (e.g., local governments) as well as private-sector tech that now
has a deepening impact on the general public.

Rather than have academic researchers be involved in participant recruitment and data collection, Community Forge staff led efforts to develop and conduct a series of 20 interviews with residents. CMU researchers only gained access to anonymized transcripts at the discretion of the CBO. Through several rounds of shared discussion and analysis, we worked together as research partners to understand local community members' experiences of gentrification, bias, and surveillance as a result of publicly deployed technologies and other university-led initiatives in the region. Our analysis further revealed conflicting incentives between communities and academic institutions, and we reflect on how these tensions hinder academics' ability to meet communities' desire for material benefits, sustained relationships, and meaningful accountability from universities.

To help make sense of the tensions and set a path for more just configurations, we turn to ethnic studies scholar la paperson's notion of a *Third University* [86]. As *"technologies of coloniali-sm,"* universities have historically been built to promote the accumulation of capital, often to the detriment of minoritized communities. Despite this, la paperson argues, universities can be reconfigured toward decolonizing visions. Drawing on this framework, we interrogate the ways in which university institutional priorities create barriers that make it difficult to build sustainable community-university partnerships and risk further harm to communities. Actively reconfiguring the university would require reorienting existing tools and technologies toward *community revest-ment*. Here, we use *revestment* rather than "reinvestment" to highlight a commitment to shifting power and ownership to communities without expecting a return through financial gains.

This research makes three key contributions to the CSCW community. First, we offer an empirical study that details community perspectives on the harms created by universities and their local technology deployments, as well as their expectations for more equitable community-university partnerships. Second, we offer learnings from a community-led methodological approach that aims to address power differentials by having the CBO staff lead empirical research, with data being shared and co-analyzed with the CMU team at the CBO's discretion. Third, by examining the institutional and structural barriers in place that hinder these partnerships through the lens of la paperson's concept of a *Third University*, we present opportunities for HCI research to go beyond individual commitments and bring forth change at the institutional level. By valuing lived experience and amplifying community voices, this work seeks to contribute to ongoing calls to address the systemic exclusion of marginalized communities from technology conversations, while promoting fairness and collective well-being in future technological advancements.

The paper unfolds across three parts. We begin by offering context on the immediate conditions that informed our research collaboration. We then review related HCI scholarship on publicly deployed technologies, the role of universities in tech innovation ecosystems, and ongoing tensions within community-based research. We then describe our collaborative methods in more detail and present insights from community interviews. These insights highlight the impacts of local technology institutions and public deployments and how current community-based research perpetuates cycles of inequality and exclusion. Further, they underscore a desire by local communities for more equitable models of engagement and collaboration. Finally, we end by discussing the complicity of academia in technological harm, learnings from our research collaboration in response to these harms, and the need for institutional investment in ongoing efforts to build community power.

2 Background

This research unfolded in Pittsburgh, home to more than 29 colleges and universities, each with their own relationship to the surrounding community [109]. Among them is Carnegie Mellon University, an academic institution internationally recognized for their computer science and engineering education. CMU has a predominantly Asian and white student body and faculty, while the population Community Forge serves consists mainly of Black residents. Over the years, CMU

researchers have been involved in the development and implementation of a series of socio-technical systems that have generated harmful impacts on the local communities. For example, in 2017, CMU researchers developed and deployed a "predictive policing" algorithm designed to aid local police in predicting where future crime would occur and determine where to allocate additional patrols, which raised serious concerns about racial discrimination and over-policing [100]. In another case, CMU itself proposed the use of facial recognition technology by its campus police, which raised privacy and civil rights concerns, as such systems might result in the profiling and targeting of marginalized communities [51]. In addition, CMU faced criticism for creating a promotional map of Pittsburgh for prospective students that excluded Black neighborhoods. This decision was seen as perpetuating systemic racism, as few residents from these neighborhoods are part of the university community [97]. In response, students and community members pushed back against the omission, with one resident using counter-mapping techniques [32] to highlight the city's Black neighborhoods under the banner "Hood Lives Matter" [101]. Meanwhile, CMU has fueled the rapid growth of tech companies and "innovation centers" in the area, which threaten long-term residents from historically Black neighborhoods with displacement [21].

These projects have generated widespread mistrust and significant tensions between the university and local communities. For example, the aforementioned "predictive policing" algorithm faced intense criticism from local advocates for exacerbating racist policing practices against Black residents [23], and was later suspended due to a community-led resistance campaign [110]. Similarly, the proposed utilization of facial recognition technology by campus police also received strong criticism from local community members [51]. Although other Pittsburgh universities have their own complex histories with the local community [35, 61, 134], we focus here on CMU, as it is the academic home of our research team. This allowed us to grapple with and challenge our own connections to this recent history. It was within this highly complex and contentious environment that we began our conversations and later research collaboration.

3 Related Work

In the following section, we outline the related work in two areas. As a growing body of work in HCI has been focusing on issues of fairness, accountability, and transparency in the deployment of public technology, we first present an overview of existing techniques and toolkits and highlight their limitations. Second, we outline recent community-based research practices and their tensions before describing our contributions to this line of work.

3.1 Publicly Deployed Technologies and their Discontents

The rapid development of data sciences has ushered in a new era of technological advancements that significantly impact people's public lives. Recently, algorithmic decision-making systems powered by machine learning techniques have been increasingly adopted in many high-stakes public domains in our society [89]. For example, they have been deployed to aid judges in deciding whether defendants should be detained or released while awaiting trial [42], to help child protection agencies screen referral calls [25], and to help school districts redesign their bus routing [13]. Yet, they have also raised serious concerns. Over the years, national debates, public outcry, and community backlash have erupted over biased and harmful outcomes caused by recidivism prediction algorithms [6], child welfare predictive analytics [47], and predictive policing [117]. Research in HCI communities has also long prioritized data and algorithm evaluation of public AI deployments for fairness, accountability, and transparency issues [56, 58, 119].

These technologies are often developed in isolation from the communities they are meant to serve, which has led to widespread community distrust [118]. In response to these concerns, HCI researchers have increasingly sought to engage with impacted communities in the design and

implementation of these publicly deployed technologies [12, 75, 131]. For example, researchers have conducted workshops with affected families, social workers, and service providers to understand their concerns about algorithmic decision-making systems in child welfare services [18]. They have developed accessible methods to more clearly explain the entire development life cycle of a housing allocation AI to the local homeless communities [84]. Additionally, policy-oriented toolkits have been developed to increase community participation in technology advocacy for AI policy action [82]. Despite their contributions, these efforts were predominantly led by researchers from academic institutions and often centered on research questions developed solely by the researchers themselves. In some cases, this orientation could lead to power imbalances, where the voices and perspectives of community members may be overshadowed [108].

Furthermore, scholars and community organizers have interrogated how the influence of corporate entities on technology-focused academic research further hinders community involvement in the development of publicly deployed technologies [1, 30, 132, 133, 135]. In efforts to create more transparency around these power imbalances, some community organizations have used counter-mapping and antagonistic data techniques to organize communities around the harms of technology-mediated gentrification, predictive policing algorithms, and smart city street lamps [30, 32, 132]. Stop LAPD Spying Coalition and Free Radicals, for example, created *"The Algorithmic Ecology,"* which maps the relationships between academia, non-profits, government, and private companies that helped shape the algorithms used in predictive policing [30].

In this paper, we add further detail about the harms and possibilities of publicly deployed technologies by drawing together community testimonials that surface experiences of gentrification, bias, and surveillance, as well as knowledge extraction and exclusion from research. In order to build publicly deployed technologies that truly serve the public, these interviews highlight the need for universities to move toward *community revestment*.

3.2 Opportunities and tensions in community-based research

Community-based research involves a set of approaches meant to collaboratively engage with community stakeholders to solve issues affecting those communities and has historically been used in fields like public health, education, and the social sciences [68, 74]. Within HCI, researchers have used community-based research approaches to involve communities that are often overlooked in the technology development process, as a means to share ideas, co-design solutions, and critique systems in the making [31, 62, 64, 87, 94]. For example, researchers have collaborated with communities to co-design digital applications [3, 116], develop technical capacity-building programs [67, 79, 80, 112], and establish socially-engaged art projects around technology [27, 91, 92].

While community-based research methods aim to enable more equitable partnerships between researchers and community stakeholders, recent work has highlighted the many tensions and challenges of realizing this aim, including navigating differences in power, resources, goals, and incentive structures [7, 28, 87, 113]. For example, Harrington et al. [62] discuss how researcher-led participatory design workshops can reinforce power differentials and community mistrust, while disregarding creative interventions that fail to align with technocentric ideas of "innovation." Others have discussed how institutional barriers such as limited funding structures, bureaucratic processes, academic publication commitments, and limited capacity on the part of community partners further hinder equitable and sustainable partnerships [69, 88, 91, 123].

More recently, there have been calls for community-based researchers to put forth explicitly political commitments to confront these barriers [28, 34, 67, 80]. Dombrowski et al. [41] outline a set of social justice-oriented design strategies that center on reciprocity, accountability, resource distribution, enablement, and transformation. Asad [8] draws on prefigurative politics to imagine counter-institutions that serve as alternative structures to existing academic-led research, led

by grassroots and community organizations. Acknowledging that mitigating these tensions is an ongoing process, many researchers have stressed the importance of practicing reflexivity to continuously interrogate and respond to the impacts of their research and positionality [41, 87, 88].

Our paper seeks to further the discourse regarding the constraints and possibilities in the practice of community-based research. First, we offer a complementary methodology that aims to address the power differentials between academic researchers and communities. While most community-based research initiatives in HCI have academics and communities share control in planning and managing data collection and research activities [31], our approach involved having the empirical research led by Community Forge staff, where the data was shared with academic researchers at their discretion. Second, our study adds specific detail to the types of material benefits and commitments that communities seek when engaging in research partnerships with universities. While past research has focused on the commitments of the individual researcher, our testimonials highlight how addressing these challenges and providing the material benefits that communities seek require additional commitments at the institutional level, beyond those of individual researchers.

4 Methods

Our research collaboration began amidst a set of controversies related to the deployment of technologies across Pittsburgh (as detailed in the Background), initiated by both local universities and regional governments. Prompted by introductions from student researchers, faculty members and the Executive Director of Community Forge began meeting as a loose collective to discuss the consequences of these technologies and how to cultivate partnerships that might lead to research that better addresses the real concerns and challenges facing city residents. Over the course of roughly a year, we read critical technology studies scholarship, shared materials from activists across the country fighting against oppressive systems in their own communities, and began to engage with others in our region who sought advice on existing or emerging technologies of concern. As an early example of our work together, we consulted with a County Council Member who requested input on a piece of model legislation that would ban facial recognition, and we later provided direct input on the bill itself.

In formalizing our relationship, we drafted a shared statement of purpose and began planning for how we might approach a research project together. This vision centered on the need to curtail race-, gender-, and class-based discrimination in algorithmic socio-technical systems by taking a community-driven approach, and on developing avenues for local residents to be involved in the process of public technology development. To support our work together, the CMU team secured a small grant from the Public Interest Technology University Network (PIT-UN) that only offered funding to academic institutions, writing Community Forge in as a consultant and owner of the materials that would result (no funding was used to support faculty effort). In laying this foundation, we sought to develop a relationship based on shared power and explore a sustainable structure for the community to control and own research artifacts.

4.1 Planning the Research

The research project at the center of this paper began in the spring of 2022 with informal discussions between the Executive Director of Community Forge and ten community leaders, including staff at the County Department of Human Services and Office of Violence Prevention, as well as directors, program managers and officers at several local non-profits. While these discussions initially touched on the role of universities within the region, they quickly converged around the idea that there should be a platform that allows the community to educate researchers and instructors on their perspectives, ideas, and needs. Building on this concept, the Executive Director later held a roundtable discussion with program staff at several local non-profits to identify a means of inviting

thoughts and ideas from the community in an authentic way. The approach they developed together involved Community Forge staff holding one-on-one or small group conversations with community members in a manner that could support direct and unfiltered dialogue.

4.2 Data collection and analysis

With this approach in mind, the Community Forge staff team developed a set of semi-structured interview questions that were meant to help guide discussions with community members. These questions were intentionally wide-ranging under the banner of technology and tech institutions; for example, topics included the use of algorithms by the government, how social media impacts interpersonal relationships, the role of technology in securing and maintaining jobs, how local research universities fit into the communal landscape, and the types of technologies that should be built and made available (as opposed to those on the market today).

4.2.1 Community-Led Interviews. Over a period of several months in the Fall of 2022, Community Forge staff conducted interviews with 20 community members who spanned a wide range of ages, identities, and education levels. The participants were recruited through their engagement with various programming at Community Forge, including youth mentorship, technology education, entrepreneurship, and arts programming. Staff recruited members of their communities they felt might have opinions about technology or the local universities. About 70% of the participants were recruited through Community Forge's technology education program, as they were already engaged in technology-related conversations as part of the program's mission around technology capacity building and empowerment for underserved communities. Some were current undergraduate students of local universities or had some college experience. Others used technologies for their businesses, worked in public services that used publicly deployed technologies, or were everyday technology users, more generally. The team agreed not to recruit people who were employed in the technology or academic industries such as software engineers, graduate students, or professors as they typically do not reflect the demographics of the surrounding neighborhoods that Community Forge serves.

Interviewees included County service workers, parents, young entrepreneurs, a mental health therapist, elders, members of a fathers' group, religious leaders, university students, and educators from a set of neighboring predominantly Black communities. Of the 20 participants, only two self-identified as white. The pool of people who come to Community Forge tends to be from low-income communities on the outskirts of Pittsburgh. The age of interviewees ranged from early 20s to late 70s, and about 75% had not attended any college. Each interviewee was offered $50 for their participation. To protect the confidentiality of their community members, Community Forge did not collect any other demographic data.

The interviews were conducted by four staff members and took place in person at Community Forge, either as 1-on-1's or in group sessions, based on interviewee preferences. The interviews were conducted in a "podcast-style" conversational format that many interviewees were already familiar with through the technology education program's in-house podcast studio. Due to the existing long-term relationships within the Community Forge community, staff felt that having a more open, conversational format that allowed interviewees to be amongst people they trusted helped to encourage more honest discussion around technology and local universities. Interviews lasted between 15 and 60 minutes, with an average duration of about 30 minutes. In total, staff completed 13 interview sessions, with 9 1-on-1 sessions and 3 group sessions that had between 2 and 5 interviewees. Participants are referenced by their participant ID, which include the session number (S) and participant number (P).

4.2.2 Collaborative Analysis. After licensing the de-identified interview data, the university research team was granted access and began engaging with the empirical material — transcribing the audio files (via an automated transcription service and hand correction), reading and analyzing the conversations, and drawing out initial patterns within and across the data. After becoming familiar with the material, the academic team members came together with the staff members of Community Forge who conducted the interviews for a series of collective analysis sessions that took place over several months. In total, we held 3 co-analysis sessions, each lasting about 1 hour.

We analyzed our data using an inductive and iterative approach guided by contextualized grounded theory [24]. Through multiple rounds of coding and analytic memoing, we surfaced initial themes connected to the distrust in the development and deployment of public sector technologies (e.g., use of risk assessment algorithms in the judicial system, child welfare), to perceived connections between the gentrification of neighborhoods and the arrival of large technology companies to the city, and to researchers and funders dictating the outcomes of community-based work. Through subsequent discussions among the team and later rounds of analysis, we refined our interpretations to include a focus on the examination of institutional practices that either impose barriers or empower communities' participation in decision-making about technology, and the exploration of material benefits beyond the scope of participation in research, such as employment, education and research opportunities.

On top of making sense of the interview data, in later analysis sessions and guided by Community Forge staff, our conversations turned to outlining a series of potential initiatives meant to expand and extend the partnership, including establishing a community fellowship and a reverse clinic (community members consult on technology projects), and certifications for community members. In the following sections, we discuss these ideas alongside insights from the community interviews.

4.3 Composition of Our Team

Our team of authors comprises individuals from two groups: academics affiliated with Carnegie Mellon University ("CMU team") and community leaders from Community Forge ("Community Forge team"). Some of our team members served as bridges between these two groups, allowing for a direct connection and mutual understanding. One of these individuals is a co-founder and Executive Director of Community Forge, who later became a teaching faculty member at CMU. He identifies as white and grew up in the industrial outskirts of Pittsburgh. Over the past ten years, he has been deeply invested in community building alongside residents who are often overlooked in recent efforts to revitalize the area following decades of regional divestment. The other bridging member of the team is a CMU student who identifies as an Asian American woman, and who has been actively volunteering at Community Forge since joining the project. Crucially, both the co-founder and the student reside in the neighborhood Community Forge serves.

Alongside those in bridging roles, our team also includes members who more squarely sit in positions either on the academic or community side of the partnership. The academic researchers represent a diverse range of roles, including students and pre-tenure or non-tenure track faculty. Our team possesses a wide array of expertise, encompassing academic backgrounds in computer science, community-based research, and ethics in AI. The CMU team comprises four women. In terms of racial demographics, the CMU team consists of two members of Asian descent, one member of Middle Eastern descent, and one member who identifies as white. While Community Forge primarily serves a community predominantly composed of Black residents, the CMU team does not include any individuals who identify as Black. The Community Forge team, on the other hand, includes two staff members who identify as Black, two staff who identify as Latino, and two members (including the Executive Director) who identify as white. Three members have advanced

degrees, with the two white members holding PhDs. While all authors are residents of Pittsburgh, we also acknowledge that the majority of us were not born or raised there.

5 Findings

In what follows, we center community testimonials that describe how universities and the public sector have contributed to a series of harms on local Black communities. First, interviewees reflect on their sense that the heightened presence of technology companies in the area — in part, attracted by the large number of universities in the region — has led to increased gentrification, displacement, and surveillance. We then outline how interviewees articulate a sense of mistrust of academic institutions due to exploitative research practices they have witnessed and a lack of investment in Black communities. Finally, we highlight community visions for more equitable university-community engagements that center on accountability, material benefits, and sustained relationships.

5.1 Localized Impacts of Technologies

Throughout our interviews, community members expressed various anxieties about the technology-driven developments that were transforming their city and their lives. These included facing threats of displacement with the growing presence of technology companies and universities in their neighborhoods, and experiencing algorithmic bias with university-led smart city initiatives. In describing their experiences and their relationship to policing and surveillance, our interviewees highlight how these issues are not new, but rather follow a lineage of racialized violence in the name of public good.

5.1.1 Impacts of Gentrification. After facing rapid decline due to the collapse of the steel industry in the 70s and 80s, Pittsburgh has experienced a "revival" over the past decade with major technology companies such as Google, Apple, and Facebook moving into the area, an effort encouraged and sometimes spearheaded by CMU [9]. CMU has touted their central role in this "tech revival," both in terms of producing new tech talent, establishing new tech innovation centers throughout the city, and being an incubator for new tech startups [85]. As a result, one of the primary concerns brought up by interviewees was the tech sector's impact on gentrification within local communities. S3P2 explained that the presence of technology companies is a double-edged sword, where it can transform a previously struggling city into a flourishing one by some measures, but that it can also cause the displacement of long-term residents:

> "You have to sort of question what brings about that change. [Who] has to move out in order for [tech companies] to move in? [...] I definitely think that there are ramifications to those actions, because [long-time residents] have to move out of areas that they have known their entire lives [...] it just kind of forces people to change their whole entire way of life." — S3P2

S3P1 echoed this concern around displacement, stating, *"it's not just the technology that's going to bring a change. It's what comes with that change."* They noted that Pittsburgh has faced a number of social issues over the past century, such as redlining and gentrification. By connecting the growing presence of technology companies with these issues, S3P1 perceived this phenomenon as a continuation of the city's historical and ongoing efforts to displace and segregate communities across racialized lines [39, 83]. As technology companies move in, so do new higher-income residents. Their presence draws in additional infrastructure investments and amenities for their benefit, which then contribute to higher housing costs and the displacement of long-term low-income residents [93]. This point emphasizes recent scholarship in HCI on the intersections of technology and gentrification, both in terms of how apps such as Airbnb and Zillow replicate racial

and class-based discrimination in place-based settings [26, 32, 70], and how HCI as a field has enabled gentrification through technocentric urban research initiatives and corporate sponsorships [32, 106].

According to interviewees, gentrification has also brought with it increased surveillance on Black residents. For example, S2P1, a long-term Pittsburgh resident, recounted his experience being surveilled near his home — *"the only Black house"* on a street that now houses mostly non-Black university students:

> "They put two nice [cameras] right on the side of my house, bro and I'm like, 'whoa.' And they only do that for the [University of Pittsburgh] students that live around me. I've been up in this place for 11 years, and there's not been no cameras until last past two years." — S2P1

S2P1 questioned the motivation behind the cameras, perceiving them as a sign of racial profiling. He also expressed concerns that police can misuse the technology to target and incriminate him, adding that they could use the technology *"to pinpoint you or try to manipulate your surroundings to make sure they'll get you."* These concerns reflect real harms to marginalized communities due to the deepened entanglements between private technology companies and the public sector [17]. For example, Amazon, the maker of the Ring doorbell, has multiple partnerships with police departments throughout the US and has come under fire for handing video footage over to police without owners' permission [120]. Although smart home cameras are often promoted as a means to keep neighborhoods safer and to reduce crime, research has shown that these technologies make it easier for private citizens to casually surveil one another [60] and law enforcement to target certain racial groups [48, 120]. These examples demonstrate the high costs of gentrification for Black communities and the role of local universities and tech companies alike in contributing to these harms.

5.1.2 Impacts of Algorithmic Bias and Surveillance. As public sector technologies have become increasingly prevalent in Pittsburgh, so too has public awareness around their deployments, with interviewees reflecting on how these technologies have impacted their communities. For example, S7P1 was especially critical of the use of predictive systems within the social welfare and criminal justice system due to the likelihood of stereotyping him: *"So you're telling me because my mom and my dad have criminal backgrounds, that I'm destined to have a criminal background?"* Referring to risk assessment algorithms that predict whether a person will commit a future crime, S7P1 calls attention to the bias within these algorithms as they use historical proxy data (e.g., his parents' criminal records) for their predictions, deeming him more likely to commit a crime even if he has never committed one before. While these tools have been promoted as an objective measure to determine crime risk, past literature has repeatedly surfaced how these algorithms replicate historical racially-biased policing practices against Black people [6, 99].

Additional interviewees cited other examples of discriminatory public sector algorithms. S1P2 specifically mentioned how CMU worked directly with the Pittsburgh police department to develop a predictive policing algorithm that would detect crime hotspots throughout the city [100]. While S1P2 acknowledged that such an algorithm may deter crime, they also raised concerns about its accuracy and the threat of over-policing in low-income neighborhoods:

> "Maybe the data isn't fully correct or it might be sending police officers to where it's not really needed. And then maybe some of those people in our area are figuring, 'Well, is this a bad area?' We don't have that many problems around here, just because maybe there's a carjacking or two within a week of each other." — S1P2

S1P2 stated that data inaccuracies could create a hotspot in a relatively safe neighborhood where police presence may not be warranted. This, in turn, could create a sense of distrust among residents living in the area, who may feel like their neighborhood is being mischaracterized as unsafe based on a set of isolated incidents. The CMU-developed tool was deployed in 2017 without public consultation or engagement, and was eventually suspended in 2019 due to public push back around its lack of transparency and potential for racial bias [100]. Similar successful public resistance efforts to ban predictive policing have occurred throughout the U.S., most notably in Los Angeles [14].

These examples, when brought into larger conversations around historical and ongoing racism by the U.S. government, prompted some interviewees (S12P1, S14P1) to question whether public sector technologies can truly be created to serve and protect them as Black Americans. Rather, they highlight that those who end up being protected are often those who do not look like them. S12P1 argued, instead of serving everyone equally, public sector technologies serve whoever controls them, in this case, the police:

> "Historically speaking, we know why the police were created and what they were created to do and who they were created to enforce. So, unless those cops work in a system that is intentional about going against the grain...and they're actually trying to protect and serve everybody [and] not just white people, honestly, I think that's when it holds people accountable [...] But if you've got a cop that's working in a system...they have that 'thin blue line'[1] and they're going to protect themselves, then it doesn't matter [...] Once again, the technology can be used for good or bad depending on who's using it and what they're using it for." — S12P1

S12P1's statement alludes to the fact that because modern policing in the US has roots in slave patrols that controlled and oppressed enslaved Black people, racism remains deeply embedded within the law enforcement practices of today [19]. Although police are enlisted to "protect and serve" the public, racial disparities have long pervaded every aspect of the criminal justice system and anti-Black police brutality is well-documented [4, 20, 124]. Therefore, S12P1 argued that unless the police work to challenge the systemic racism embedded within the criminal justice system, no amount of body cameras or other technology will truly hold them accountable without more structural shifts in power. According to interviewees, the public sector technologies they observed rarely benefited the communities most affected by them. Interviewees noted that this is likely due to long-standing systemic and historically-rooted racial biases that undergird their development. Addressing these issues then would require a dismantling of the systemic and institutional foundations that drive these technologies.

5.2 Community Mistrust of Local Research Universities

In interviews, community members spoke about their mistrust of universities due to the extractive nature of academic research and their lack of engagement with local Black communities. While academic researchers may receive material benefits for leading research initiatives like funding, recognition, and publications, interviewees noted that communities who contribute to research get little in return. Class-based differences between researchers and communities and a lack of Black faculty members and students also contribute to a sense of distrust. To address these issues, our interviewees called for universities to do more to invest in local Black communities beyond research engagements.

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[1]"Thin blue line" is associated with Blue Lives Matter, a police solidarity movement in direct opposition to the Black Lives Matter movement

5.2.1 Mistrust in Academic Research. Although some interviewees noted the benefits of participating in academic research with local universities, others were more skeptical. S7P1 discussed how members of his community had often been recruited to participate in surveys or user tests for several publicly deployed technology initiatives, such as case management tools for reentry programs. Although S7P1 believed that some university researchers mean well, there remained stark inequities between communities and academic institutions, where universities make *"a profit from the community members that are being utilized for their surveys or for their testing."*

S7P1 noted that while universities may get *"millions"* of dollars and gain widespread attention and credit for building publicly deployed systems, communities are *"still economically in the same rut that they were in"* and *"get nothing from it."* Since research is dependent on their data and participation, S7P1 called out the ethical concerns around community members receiving comparatively little benefit or change to their economic conditions. Overall, S7P1 emphasized the need for more equitable resource distribution and a focus on localized impact with communities.

S7P1 and other interviewees also described the disconnect between academic researchers and communities, both in terms of lived experiences and class-based differences, which adds to the distrust among community members (S7P1, S8P1, S8P2). S7P1 perceived researchers as affluent individuals who would come into communities in *"a three-piece suit"* carrying a *"high-tech computer"* and a desire to do research with communities, but not wanting to compensate them fairly: *"You pull up [in a] Tesla [or] Ferrari, and like, 'Hey, I want to do this research on you, but it's free.' You're in a Ferrari. I'm waiting for the bus. It doesn't make sense...then you have the distrust."* S7P11 further described how researchers' use of inaccessible language exacerbated this distrust: *"You're coming in articulating yourself in a different way that this community is not going to relate to you...you're not speaking their language."*

Because research goals are often dictated by funders and academics with no connections to communities, there is a general reluctance and distrust in engaging in academic research (S7P1, S8P1, S8P2). Interviewees noted the extractive nature of academic research and that Black communities often serve as the *"test subjects"* and *"guinea pigs"* of research but are rarely the primary beneficiaries. Specifically, S8P2 stated that there is community skepticism around engaging with CMU, due to its perceived connections with particular government agencies that have historically been hostile to Black communities:

> "I mentioned something about Carnegie Mellon to somebody, and they said 'Oh, great. Yeah, now my stuff is gonna be examined by people that are informing the CIA.' And I think there's a level of skepticism that everybody has for valid reasons that you use the term 'test subject.' I feel like oftentimes we're utilized as a Petri dish." — S8P2

As S8P2 noted, this community distrust stems from a long history of scientific exploitation and experimentation on Black communities in the U.S. [43, 115, 129]. As such, S8P1 emphasized that building trust and promoting transparency is crucial in order for community members to feel safe in sharing their information or participating in research:

> "I have to trust you to share. That's intellectual property, that's my personal business. You want to know how many children I got, you want to know my address, you want to know my blood type, you want to know stuff or whatever your research thing is. That's all my personal stuff. And I know nothing about you, I know that you're going to collect this information and you may follow up with me later. So I really don't know where it's going, or what it's being used for." — S8P1

S8P1 noted the power imbalances between researcher and participant, where he, as a participant, is expected to give out sensitive information about himself without information in return about the researcher or how they intend to use his data. Regarding his data as a form of intellectual property,

S8P1 viewed his participation in research as a valuable form of knowledge work. Together, these testimonials underscore the importance of trust, transparency, and reciprocity when it comes to establishing more equitable research practices.

5.2.2   Universities' Lack of Engagement with Local Communities. Outside of academic research, interviewees believed that universities in the region have little record of investing in local communities. In one session, S2P1 explained that he saw little evidence of academic institutions creating programs that would lead to tangible benefits for communities:

> "What are they doing? [...] There's not a turkey drive, there's not a new building that is a community center. There's not free iPads to the elementary school that's down the street from you [...] No, I don't see nothing." — S2P1

S2P1 further added, *"if you're a technology school, and you want to talk about being a part of the culture, you gotta understand what actually being a part of the culture is."* Interviewees criticized local universities for their tendency to isolate themselves in a bubble, where students and faculty have limited awareness of the surrounding neighborhoods. For example, S2P1 pointed out that the neighborhood within which CMU and the University of Pittsburgh are situated used to be deemed *"the hood"* before it became gentrified.

Several interviewees also suggested that a lack of engagement with local Black communities contributed to a lack of representation among faculty and students at CMU. They expressed concerns that the institution has not made sufficient efforts in recruitment (S2P1, S2P2, S2P5, S3P2). S2P1 noted that while there may be a small Black presence at the school, these students, faculty, and staff typically do not come from the local community:

> "The way that it looks for us, is we see Asian, Indian, or anybody else of the other ethnicity that goes to that school. There's definitely some Black people here and there [...] but the way that it looks for a majority of Black people is that it's...a school that a Black [person] can't properly fit in without having a certain type of…culture." — S2P1

S2P1 highlighted concerns about the perceived exclusivity of CMU and the challenges faced by Black students who may feel alienated amongst a student body that is majority white and Asian from upper-middle class backgrounds. Additionally, he voiced concern over the lack of transparency around CMU's criteria when selecting students. He believed this further contributes to the exclusion of worthy Black candidates, despite there being *"a lot of Black engineers [who] want to be a part of this."* When asked whether CMU has done enough to recruit Black students like himself, S2P2 remarked, *"Not that I've seen or experienced, no."* Another interviewee in the same session, S2P5, stressed that while he felt that universities in the region needed to be more involved in local schools, he also cautioned that Black students should not be treated as a simple checkmark for diversity but instead are invested in as whole individuals:

> "Institutions have to do a better job at recognizing and congratulating, spotlighting Black excellence so that way, it encourages others around like, 'Dang, he grew up in Pittsburgh, dang they grew up in Wilkinsburg, they grew up in Homewood." — S2P5

S2P5's sentiment suggests a strong desire for local universities to recognize and showcase the achievements of Black individuals, especially those local to Pittsburgh, as this can inspire others within the community to follow the same route. S2P5 advocated for avoiding superficial acts of inclusion that could be used to discriminate against them. By calling attention to Black excellence, he recognizes the existing talents and achievements of local community members. Taken together, these conversations highlight universities' lack of meaningful engagement with local Black communities, and how it leads to a further sense of alienation and exclusion. Instead,

what interviewees sought is for academic recruitment efforts to reflect genuine investment that recognizes their accomplishments and allows Black excellence to flourish.

5.3 Community Desire for Accountability

In seeking accountability for the harms enacted on Black communities, interviewees discussed several remediation strategies that they sought from local academic institutions. This included providing material benefits in the form of educational and employment opportunities, building sustained relationships with communities beyond research engagements, and building infrastructures of accountability to address technological harms. Interviewees highlighted that in order for technologies to truly serve them, institutions must move away from their status-driven motivations and prioritize the well-being of communities.

5.3.1 Provide Material Benefits. According to S12P1, any institution that comes to an area where Black people reside and that does not offer them *"tangible and measurable benefits"* has *"a potential to be a threat to Black people."* S12P1 explained that this threat does not necessarily have to be overt, but that harm can still be enacted when an institution — whether a company or university — remains neutral or purposefully ignorant of their needs. He instead called for accountability, stressing the importance of holding institutions responsible for their actions and imploring them to work directly with the communities to ensure that leads towards mutual benefit. These material benefits primarily centered on providing communities access to educational programs, employment opportunities, and technologies. Some interviewees, such as S1P1, pointed out that local academic institutions such as CMU and the University of Pittsburgh are wealthy in resources and that they should provide accessible community-oriented technology education programs similar to the ones that Community Forge provides:

> "[Universities] have so much money and resources and on top of that, all the different types of knowledge [...] I think they should be doing stuff like here at [Community Forge] where they got all types of technology and people and resources and they can have people from communities where they don't get that to come there and experience that... for free." — S1P1

Others felt such programs could not only help both youth and adults to build up awareness around critical ethical issues around technologies, such as misinformation on social media (S1P1, S1P2), but also provide them with crucial technology training to help gain access to professional and educational opportunities (S3P1, S3P2, S4P1, S5P1, S6P1, S7P1, S14P1). S7P1 specifically recommended that institutions provide fellowship or internship programs for youth, and that doing so would be mutually beneficial for both communities and institutions, adding, *"It's more impactful to do it that way as well, because you're getting two birds with one stone."* Not only would it attract more buy-in from the community to engage in research initiatives and offer them valuable opportunities for economic stability, but it also offers institutions an opportunity to be engaged in more localized impact.

5.3.2 Prioritize Sustained Relationships. Interviewees stressed that researchers have a responsibility to build long-term relationships with communities, getting to know them on a personal and professional level rather than viewing them simply as data points and numbers (S7P1, S8P1, S8P2). S8P2 suggested that researchers and community members must first establish a solid foundation built on human connection, in this case through shared meals:

> "We all have to eat, right? Have a series of breaking bread together, where we check our phone and our technology at the door, and we come in, and we sit down for a leisurely meal, not to solve these problems, just find out how many kids do you have? Where

did you grow up? And we get to know one another on a really base human level. And
then it it slowly evolves into achieving the goals [...] So it gets things down to a base
level, and then we can move forward from there." — S8P2

By *"breaking bread together,"* S8P2 believed that mutual understanding between researchers and
communities can be cultivated by first getting to know each other on a more personal level rather
than focusing solely on research aims. These baseline interactions, he further explained, would
naturally grow into stronger collaborations. He emphasized that these engagements should not
happen just once but should be sustained over time. Building sustained relationships was also a
concern for S7P1, who said that it was a necessary step towards rebuilding trust:

"Everything comes back to relationships, especially in underserved communities. It's
just all about the relationship and the trust. Because once you build that relationship
and you build that rapport, and then you build that trust, you have to keep that trust,
because it's going to be hard to obtain that trust." — S7P1

To support this, S7P1 suggested that researchers partner with CBOs or community leaders who
have built rapport with communities and who can act as translators between community members
and researchers. By having these community partners, researchers can cultivate more community
buy-in, which would, in turn, lead to more sustainable programs. S7P1 and S8P2 both underscored
the importance of forming genuine and sustained relationships with communities. This requires
moving away from simply doing research *on* the community, and towards being *of* the community.

5.3.3   Hold People Accountable, Not Just Technologies. Building on questions of responsibility,
interviewees described feeling it was misguided to place blame solely on the technology itself for
its failures. Rather, accountability should rest on the individuals who use and develop the tools
in question. Returning to the case of predictive policing, S7P1 argued that an emphasis on the
technology shifts focus away from the actual people involved in contributing to its harms:

"When you have those predictive analytics, it kind of allows you to place blame on
technology and not on individuals to hold them accountable. Because accountability
seemingly becomes like an allergy to a lot of people [...] It's easier to say, 'Hey, I'm
going to blame [predictive analytics] and not the individual. I'm going to blame the
server but not the organization, not the participant, not the person.'" — S7P1

Predictive policing algorithms like the one used in Pittsburgh were created in collaboration with
university researchers and the local police department. In other cities, there have been efforts by
organizations such as Stop LAPD Spying Coalition and Free Radicals [30] to build public awareness
around how different actors shape these algorithms, connecting academic institutions, government
agencies, and private interests. In a similar light, S7P1 emphasized the importance of holding
individuals accountable for the harms of technologies, which not only requires transparency and a
focus on the individual actors, but also the underlying systems that support them.

Solely focusing on the technology also allows technologists to avoid addressing the broader
systemic issues that create the conditions to which technologies are designed to respond in the
first place. S8P2 stated that technology is often seen as a band-aid solution that may cover a wound
superficially but fails to address the root cause of the issue:

"Ultimately, I think the problem isn't so much technology as our approach to why
we're using the technology. And at the root of the problem, you find it's always [that]
there's a manipulative aspect, because it's all about making money... I think we're a
little lopsided and our pursuit of profit [...] So I think we have to kind of backtrack a
little bit and see what we can do to rectify our intentions and our purpose for using
the technologies that emerge." — S8P2

While S7P1 called for more accountability from the various actors involved in the makings of a specific technology in question, S8P2 interrogated the underlying values embedded within the technology itself — in this case, profit-driven motivations. S8P2 observed even technologies meant to address community issues still had a primary pursuit of financial gain. To remediate this issue, S8P2 stressed the need for a value realignment that might instead prioritize the well-being of communities. As these testimonials demonstrate, building sustainable infrastructures of accountability that allow for the provision of material benefits and building of sustained relationships must go beyond the commitments of individual actors and reliance on "band-aid" solutions. Instead, according to interviewees, it necessarily involves a fundamental reconfiguration of values at the institutional and structural level.

6 Discussion

Throughout our interviews, community members raised questions about the underlying motivations that drove local development projects designed to serve city newcomers drawn in by the burgeoning tech scene and publicly deployed technology pilots that subsequently contributed to increased displacement, policing, and surveillance of Black communities. Interviewees also expressed concerns about universities directly profiting from community members' participation in research projects, using their data to gain access to large research grants while communities receive minimal benefits in return. While interviewees hoped that university-community collaborations would open the door for educational and economic opportunities for their communities, few saw this occur in practice. These testimonials, when put into context with local universities' involvement in the growing presence of tech companies in Pittsburgh, make it evident that communities saw both universities and tech companies as *one and the same* and were concerned about the impact of these academic-corporate alignments on their lives.

In *A Third University Is Possible*, la paperson [86] describes the *First World University* as firmly embedded within the academic-industrial complex, merging academic research with capitalistic aims of accumulating patents, publications, and brand prestige. In contrast, the *Third World University* involves appropriating and reinventing *First World* technologies towards decolonizing goals. As a real-world example of a decolonizing university, la paperson offers Te Wānanga o Raukawa. Born from a desire to empower and preserve Māori identity, language, and culture, Te Wānanga o Raukawa blends accredited higher-education curricula with Māori-centered practices and philosophies [96]. Drawing on this framework, in the remainder of this paper, we reflect on the university's role in perpetuating a culture of accumulation, and how this contributes to a cycle of harm to communities. We then unpack learnings from our chosen methodology in response to these harms and how it impacted our research collaboration together. Finally, we present an alternative framework that centers on university *revestment* in communities as a means of developing relationships that truly serve the public interest.

6.1 Academic Accumulation and Institutional Barriers to Community-Based Research

As a *First World University*, CMU has championed itself as a world-renowned research institution in computer science, robotics, engineering, and business with strong ties to technology companies, defense contractors, as well as federal government agencies [127]. The institution is also recognized as a top university in technology transfer. In the last ten years, it has commercialized research to form hundreds of startups that have raised billions in follow-on funding [55]. Similarly, the University of Pittsburgh has established itself as a major research hub, particularly in the health sciences due to its affiliation with the University of Pittsburgh Medical Center (UPMC) [128]. As the largest non-governmental employer in Pennsylvania, UPMC has not only played a significant role in shaping Pittsburgh's local economy, but also expanded its influence globally, generating $28

billion in operating revenue in 2023 [128]. Meanwhile, the endowments of both institutions has grown substantially through investments in private equity and hedge funds over that same period [52]. This trend is not unique to Pittsburgh. Academic institutions across the U.S. have increasingly strengthened their ties with corporations [5, 37, 50, 103]. This reflects a broader shift in higher education, where corporate influence — combined with the increasing precarity of academic jobs and limited access to public funding — has propelled academic institutions to actively seek large donors and increasingly operate as businesses [133, 135].

This emphasis on accumulation significantly impacts academic research. Quick publishing timelines, limited grant funding, increasingly bureaucratic structures, and the transient nature of students all contribute to the propensity for shorter-term, one-off community-based projects [88, 91, 123]. Furthermore, community-based research is often perceived merely as service work by research institutions, and its impacts do not fit neatly with quantifiable research evaluation metrics, which creates hurdles in faculty tenure cases and graduate student milestones [49]. For example, building and maintaining trust and rapport with communities takes sustained time and effort and often involves invisible labor that is rarely recognized as a legitimate research activity [87].

These barriers make forming lasting partnerships with local organizations like Community Forge especially difficult and risk giving the impression that academics only engage with CBOs as liaisons to gain access to a particular community or to be the tokenized face of a community rather than an active research partner. During a co-analysis session, one Community Forge staff member mentioned that relationships between academics and CBOs tended to be superficial, noting past experiences where academics would *"come in, observe, collect data, [and] bounce."* On top of this, CBOs also face their own hurdles with limited funding and capacity [16, 121, 130] that make it challenging to engage in research with universities. While academic researchers are ostensibly paid to do research, for Community Forge staff and other members of CBOs, getting involved in academic research means taking critical time away from other initiatives that directly serve their community. Additionally, there are potential hidden costs when CBOs align with universities, where the stakes are much higher for CBOs if something were to go wrong. While academic researchers can typically leave a site without facing community accountability, building and maintaining strong community relationships is critical to a CBO's survival [121]. These differences in goals and incentive structures drive community distrust of academic institutions. As our interviews made clear, this devaluing of community-engaged research and focus on quick returns by academics has led to detrimental consequences for the well-being of local communities. Echoing S12P1, until universities establish the necessary infrastructures for sustained community engagement and demonstrate accountability at the institutional level, they remain *"potential threats"* to local communities and risk perpetuating community mistrust of academic institutions.

6.2 Reflections on our methodological approach in community-led data governance

One of our main contributions of this paper is a methodological approach intended to address power differentials between academic researchers and communities and have the research be more community-driven. Community-based research partnerships typically include some procedure around data sharing. For example, it might involve collaborating on data collection or analysis or academic researchers conducting the research and then giving data access to communities [31, 66, 71, 91, 95]. Our approach involved having the empirical research be led by Community Forge staff, who then had full discretion in sharing data with the CMU team. Here, we reflect on how this approach affected our collaboration together, whether it served community needs, and considerations for future use.

This approach was chosen in response to Community Forge's concerns about the potential harms of academic-led research when the researchers have not built long-term relationships with

communities (as we detailed throughout this paper). Rather than have researchers be involved in participant recruitment and interviewing — which may lead to selection bias for participants who have more trust in academic researchers and come from more privileged backgrounds [57] — the data collection was led by Community Forge. This approach aimed to encourage broader community participation and foster more honest conversations, due to the long-standing relationships between program staff and community members. This approach also gave Community Forge full ownership of the data, which enabled the organization to use the data for other uses. For example, Community Forge staff discussed the possibility of turning the interviews into a podcast episode to share with a broader audience. Our methodology falls in line with other forms of community-led data governance, where communities have full ownership and control over the research design and the content they produce [22, 111].

While there was an interview protocol that was formulated by Community Forge to guide conversations, staff interviewees had agency over what questions they asked, how to conduct the interviews, who they chose to recruit, and whether they wanted to bring their own thoughts into conversations. In academic research practices, there is a desire to have consistency in qualitative research design to achieve "dependability" [73]. However, this conflicts with Community Forge's desire for more organic and conversational "podcast"-style approaches to interviewing. As past research has noted, community-based practices do not fit neatly with scientific standards of rigor [31, 45, 64]. We contended with this issue by not evaluating the recorded interviews the same way as one would in a qualitative interview study, but rather as a form of rich media-based storytelling [36]. Inspired by Black Podcasting, these interviews served as a "counter-public" for local communities to center their histories, knowledge, and experiences, and to provide counter-narratives [72].

Because of our decision to assign the participant recruitment and interviewing to Community Forge staff and the initial data analysis to the the CMU team, the latter encountered some gaps in their ability to understand the data. Since interviews were de-identified and demographic data was limited to protect the identities of participants, researchers faced instances where they did not understand important contexts that were discussed. While our co-analysis sessions were generative, they were limited in frequency and duration. As such, we mostly focused on discussing higher-level themes and possible initiatives for more equitable university-community partnerships during these meetings. Researchers were hesitant to ask Community Forge staff specific follow up questions about particular participants due to wanting to respect what was shared (or not shared) by interviewees, and also did not want to overburden staff members [108]. Mahyar et. al [95] note similar difficulties of holding community-based collaborative analysis sessions during time-limited, in-person meetings.

These limitations, however, did not mean that Community Forge staff lacked the ability or desire to be more involved in the research process. During one of our co-analysis sessions, a Community Forge staff member who conducted interviews voiced that they did not have much input into the initial scripting of the the interview protocol or research questions and wished there had been more "game planning" among staff members before conducting interviews. Although our approach aimed to be more community-led and address power differentials between academics and community partners, it is important to point out that CBOs like Community Forge are not immune to intraorganizational issues around hierarchy and power dynamics, and that these may inform who gets to have more decision-making power and involvement in the process within a specific community. With both points, maintaining continuous and open dialogue among team members during all stages of research remains crucial in building stronger collaborations [92].

While our process did build connections between the CMU team and Community Forge staff members, we found that it also isolated the academic researchers from non-staff community members. Apart from the lead author, who regularly volunteered at Community Forge outside the

context of this research, most of the academic team members only interacted with staff during scheduled meetings. Echoing one of our community members who said they expected researchers to *"break bread"* with them outside of academic contexts, we stress that building sustained relationships requires researchers to be *in* community outside of projects that could be seen as extractive.

To end, although our methodology can serve as a potential model for community-led data governance and address power dynamics in community-university partnerships, our experiences demonstrate that simply applying this method alone does not necessarily lead to more effective community-university collaborations or stronger relationships with community. Here, it is important to reiterate that the main reason we chose this approach was because of community mistrust of academic researchers. Therefore, a path towards more equitable community-university partnerships must involve doing the work to repair this trust. This involves *revestment* in community, which we detail in the next section.

6.3 Towards University Revestment in Community

What would it mean for research institutions to function as a *Third Universities*, redirecting their focus away from the pursuit of status and funding toward *community revestment*? According to la paperson, this involves appropriating and reinventing existing technologies in the *First World University* towards decolonizing goals. The strategies of a decolonizing university are not utopian. Rather, they are pragmatic, flexible, and contradictory, and can be implemented across multiple scales – from the individual to university-wide. Although past community-engaged HCI scholarship has highlighted the important role of the individual researcher in addressing existing power structures and inequalities [41, 44, 62, 87], we argue that accomplishing this shift also requires a reconfiguration of existing institutional infrastructures to get to the *"root of the problem"* (S8P2).

What if universities were to position the local community as a major sponsor to whom they are accountable? A shift like this would require reassessing the funding models that support community-engaged work within universities. As Tandon et al. [123] found, continuous funding is crucial for sustaining community-based initiatives over time. Academic institutions could allocate dedicated and long-term funding for community-based research initiatives that would involve different evaluation criteria from traditional research grants, such as testimonials from the community as a measure of impact [49]. Additionally, review committees would need to recognize community-engaged scholarship within their promotion and tenure policies. At the institutional level, certification bodies such as the Carnegie Elective Classification of Community Engagement could help reinforce community-engaged practices [29]. To receive this designation, colleges must provide extensive documentation that indicates a commitment to community engagement, such as within faculty promotion and tenure guidelines, as well as university-wide strategic plans [114].

Revesting in community would likely involve institutional commitments to supporting community-driven innovation through resource distribution, research, and designing or co-creating solutions with communities [33, 46, 123]. Correspondingly, it would mean establishing infrastructures for community governance over public interest technologies, which would determine how these systems might be conceived, developed, implemented, and assessed over time [18, 75, 81]. As a model for what this might look like in practice, the Civic Laboratory for Environmental Action Research (CLEAR) Lab has developed the practice of "community peer reviews" that allow community members to have direct input on academic research, such as defining what research questions are worthy of study and how the community is represented in the scholarly literature [90]. Beyond a particular project, we echo our interviewees' call for universities to provide concrete material benefits and compensation for communities. This would inherently depend on the needs of the community, but could take the form of hiring community members as paid research staff, providing

funding and educational opportunities for community members, hosting faculty talks and work-shops at community spaces, and having community members co-develop curriculum centered on the ethical impacts of technologies from a localized perspective. On the Community Forge side, staff members valued opportunities for professional development and more resources to further their work as educators, activists, and community builders who help sustain their organization. When community-university partnerships are done well, as one Community Forge team member put it, it should be a *"win-win for everybody"* [31, 41, 63].

Since this work began, CMU has made promising new investments in the local community, including the establishment of the Center for Shared Prosperity dedicated to fostering stronger community-university partnerships under the guidance of a "community committee" [53]. While we welcome this effort, we caution that unless academic institutions fully commit to partnership on the community's terms, there remains a risk of perpetuating the cycle of harm. Given this context, another opportunity for community revestment emerges. As "charitable nonprofit" organizations, universities currently have little to no obligation to pay taxes, which could otherwise be used to directly benefit local communities [10]. This tax-exempt status amid growing university-industry development has sparked ongoing debates about the responsibilities of academic institutions to the areas in which they reside. At CMU, the Center for Shared Prosperity has fostered these very conversations, hosting a panel of academics, policymakers, and activists to discuss this critical issue [54]. Additionally, Pittsburgh Mayor Ed Gainey has challenged the tax-exempt status of properties owned by universities in the region in an effort to get "everyone to pay their fair share" and re-align university financial practices with their stated commitments of community enrichment and development [59, 78].

Rather than prescribing a particular notion of what revestment could be, we instead look to real-world examples where this shift in power to communities is already taking place. For example, faculty, staff, and students from Rutgers University have been organizing with local communities using the framework *"Bargaining for the Common Good,"* with the aim of having a seat at the table for institutional decision-making and the ability to apply pressure to prioritize community needs [125]. Through collaborative research, the coalition determined that university students and community members shared mutual concerns around low-wage work, housing, and healthcare and tailored their organizing campaign around these issues. Ahmed [2] explains that the work of the Rutgers coalition shows how research can be used as a tool to develop concrete solutions to broad issues facing the community rather than treating social issues as mere objects of study. Across the U.S., university students have pushed universities to divest from corporate entities tied to militarism, fossil fuels, and gun violence through protests and teach-ins [65, 102]. Here in Pittsburgh, it was the strong organizing efforts of a coalition of university and community members that led to the suspension of the predictive policing and facial recognition programs [23, 110]. Building on la paperson and a growing number of cases like these, we argue that the machinery of the university can be used to dismantle and refigure it — not in some distant future, but right here and right now.

6.4   Limitations and Future Work

As with many community-based research studies, aspects of our findings may be unique to our location and institutional contexts. That said, the phenomenon of tense relationships between local community members and university actors, due to issues of historically extractive and harmful research or the failure of institutions to be "good neighbors", is a well-documented issue (one witnessed first-hand multiple times over in different locations and institutions by several members of our research team). It would be beneficial then to collect a wider set of case studies of partnerships across other institutions to compare and contrast insights and determine which findings apply more

broadly. Notably, our interviewees had little to no prior experience with participating in academic research (community-based or otherwise) prior to their involvement in this project. Conducting interviews with community members who have had such experiences could reveal differences in perceptions. Additionally, we engaged with members from only one CBO. Expanding our interviews to include members across other parts of the city would have likely brought other concerns to bear.

7   Conclusion

In this paper, we sought to understand how members from a local community perceive the impacts of the publicly deployed technologies and community-university partnerships on their lives. In collaboration with a community-based organization, we shifted the paradigm from researcher-led to community-led empirical research to find that communities faced a series of harms due to the conflicting incentives between them, tech companies, and academic institutions. We reflect how this hinders the ability to meet community interests in community-university partnerships. These insights contribute to broader efforts that seek to address the systemic exclusion of marginalized communities from technology design and decision-making, and to advocate for material benefits beyond research contexts.

8   Acknowledgments

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