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RESEARCH ARTICLE

Building urban community resilience through university extension: community engagement and the politics of knowledge

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Abstract
Many land-grant universities are examining approaches to community engagement to better align with the US land-grant mission of knowledge democratization. With a growing majority of the United States' population living in urbanized spaces, it is a societal imperative for university engagement initiatives to devise strategies for engaging people on the complexity of urban issues central to individual and community wellbeing. Effective urban engagement demands collaboration and strong relationships with urban organizations and residents to co-create approaches to urban concerns. Through narrative-based inquiry, we explore urban engagements within Penn State Extension (PSE) across the Commonwealth of Pennsylvania (USA). PSE, located administratively in the College of Agricultural Sciences, is charged with carrying out Penn State's land-grant commitment to serve Pennsylvania's citizens through community engagement and nonformal education in the agricultural and food, human, and social sciences. We examine extension educator and faculty practices, program development, community engagements, and experiences, and those of community stakeholders. This work draws upon democratic methods to uncover the undergirding philosophies of engagement within PSE and how communities experience those engagements. This project offers an entry-point to longer-term applied research to develop a broadly applicable theory and praxis of translational research, engagement, and change privileging urban community resilience.

Keywords Cooperative extension · Urban engagement · Translational research · Community resilience · Epistemologies

1 Introduction: a community resilience framing on urban engagement

Cities are the center of foodsheds, economic activity, almost 85 percent of the US population, and racial, socioeconomic, cultural, religious, and political diversity. Urban areas, like suburban and rural spaces, are intensely impacted by a series of seemingly intractable or "wicked" problems, including food insecurity and poor nutrition, natural and environmental resource conflict and climate change, political disenfranchisement and marginalization, educational inequities, and health disparities, including those that have been exacerbated by the COVID-19 pandemic. These wicked problems lay bare structural inequities along racial, gendered, economic, political, and class lines. While issues facing urban residents are often similar to those facing communities across the urban–rural continuum, geo-political, social, and demographic factors often increase the complexity and change the dynamics of dealing with or managing these issues in urban spaces. Across Cooperative Extension systems, educators, faculty, staff, and administrative leaders at land-grant universities are positioned to directly serve urban residents and to effectively engage across urban space to tackle these complex and cross-sector problems. These universities have both a societal obligation and unique scientific and organizational capacity to respond to the complex and dynamic needs of urban populations, including during times of vulnerability.

Urban community resilience offers a framing for the wicked and interconnected problems impacting communities in both acute and protracted ways. We define this concept as the capacity for socio-spatial relationships and

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networks to change over time through democratic and equitable processes of individual and collective learning as they respond and adapt to crises and shocks in various systems. Our notion of community resilience embraces the idea and goal of community systems and communities adapting and strengthening in the face of disruption rather than returning to a previous perceived ideal or equilibrium state (Taleb 2012; Fortunato and Alter 2022). In other words, urban community resilience integrates increased adaptive capacity into urban systems, mitigating endogenous risk and strengthening capacity to respond to exogenous uncertainty associated with acute and chronic shocks and disturbances, reducing exposure within all communities to these disruptions. An understanding of resilience as embedded in community offers a starting point to interrogate equity, security, development, and sustainability within urban society and aligns us epistemically with a praxis rooted in democracy and democratic engagement. This research asks how university Extension systems can best promote community resilience, deploying a normative concept of resilience that includes an equity and social justice lens to explore how communities negotiate resilience with, exist within, and relate to other systems and structures.

Writing about the community impacts of hurricanes, geographer Neil Smith challenges the concept of a "natural" disaster when he defines all elements of disaster as a "social calculus" including "causes, vulnerability, preparedness, results and response, and reconstruction" as well as "who lives and who dies" (Smith 2006, p.1). Following this political ecological logic, community resilience is in part predicated on a more equitable allocation of resources and decision-making power, especially in historically marginalized and under-resourced communities. A political ecological approach to understanding shocks and disruptions associated with critical issues, and approaches for addressing these issues, invites deep, democratic, and equitable engagement with people, systems, processes, and infrastructures that might lead to more robust community resilience across urban space.

The US-based land-grant system is rooted in a promise to democratize knowledge, learning, and the application of such. This societal and democratic promise, together with Extension[1] experience with community outreach and engagement, is central to addressing critical social, economic, and environmental issues across the urban–rural continuum. To promote individual, community, and environmental wellbeing across space, university outreach and engagement initiatives, including Extension, must devise strategies for engaging the complexity of urban issues. Importantly, this includes the complexity of presenting Extension as a viable resource in urban communities that have heretofore been underserved by Extension. Unlike many rural places where Extension is a well-known and trusted community resource, urban residents often do not know of or consider Extension as a source of education, problem-solving, community development, or collaboration.

Through narrative-based inquiry using key informant interviews, we explore Penn State Extension's urban engagements and programming as a case study in urban-focused translational research and engagement. We examine extension educator and faculty practices, community engagements, and experiences, and those of community stakeholders. This work draws upon democratic methodology and methods to explore undergirding philosophies of translational research and engagement within Extension and how communities experience those engagements. This research offers an entry-point to longer-term applied research to develop a theory of translational research and engagement and change privileging urban community resilience. While our study is specific to Penn State Extension (PSE), our examination of research and engagement interdependence and integration as a pathway toward greater urban community resilience has broad relevance not only across the United States, but internationally as well (Adams et al. 2019; Musacchio 2008; National Research Council 2009; Wong et al. 2020). Effective translational research and engagement demands collaboration and strong relationships with organizations and residents in the co-creation and understanding of and approaches to addressing the social, economic, and environmental concerns of people living and working in urban places. Such engagement is the result of an effective integration and translation of community and scholarly knowledge into actionable community collaborative work. This inquiry explores the praxis of urban extension educators across Pennsylvania, how institutional barriers and opportunities inform their work, and what broad learnings can be gleaned regarding translational research and engagement praxis from the years (or decades) of individual and collective knowledge and experience of these educators.

It is important to note that this research focuses explicitly on urban Pennsylvania not because of any perceived ontological differences between urban and rural spaces or people, but because urban areas in Pennsylvania have been and continue to be underserved, with little organization-wide effort put forth to understand Extension's possible contributions in these spaces. Our findings may well apply equally to Extension efforts in rural and suburban places as well. Through this research, however, we focus specifically on the barriers

[1] Throughout this paper, Extension (capitalized) refers to the national, federally legislated Extension system, associated institutional conventions, ideologies, practices, and/or promises, including within the Penn State Extension system. We use extension (lowercase) to reference extension educators, administrators, and other personnel, or elements and functions of the extension system and practices we are examining.

to and promises of translational research and engagement in Pennsylvania's cities to foreground the intersectionality of the class-based and racial politics of *not* effectively serving urban residents as well as to highlight the need to build responsive, place-based, and collaborative extension practices regardless of geographical location.

2 Background and literature: translational research, extension, and engagement

2.1 Translational research

Translational research is often discussed in the context of medical or clinical research and practice, where the goal is to "move basic scientific ideas to practice and health impacts" (Trochim et al. 2011). The Bronfenbrenner Center for Translational Research (BCTR) at Cornell University describes translational research as a process that brings together researchers, practitioners, policy makers, and community members to improve research, policy, and practice of all these stakeholder groups. Our work adopts a definition of translational research that borrows from both of these ideas: moving ideas to practice and working across different knowledge systems (e.g., scholarly, practitioner, experiential, and local forms of knowledge.) We emphasize, both in our methodological approach to research and in our conceptual examination of current praxis, that knowledge does not move only from researchers to practitioners and community members but must also translate from community members and practitioners to researchers to inform scholarly agendas and methodologies. This includes important collaborative relationships between extension educators (who are in the field and have a particular expertise and lived experience of working with communities) and faculty (whose research is ideally both informed by and informs extension programming and engagements.) Our concept of translational research rests upon the ideals of epistemic pluralism, the democratization of knowledge systems, and the social construction of knowledge and praxis. In effect, translational research is grounded in dynamic multi-directional collaboration and engagement.

2.2 Extension practices over time

The Smith-Lever Act legislated Extension in 1914 at a time when demographic change and booming land ownership demanded greater educational opportunities for farmers, families, and communities. Extension was founded to create more direct relationships between land-grant scholarship[2] and communities across each state through nonformal education and programming. Despite an almost equal urban–rural demographic split in the US at the time (US Census Bureau 1913, 1921), Extension has traditionally served predominantly rural and agricultural spaces to increase farm production, provide solutions to agricultural challenges, and improve rural life through home economics and management education. Many state Extension organizations still serve a largely rural and agrarian population, raising questions of equity in terms of who is or is not served by Extension across identity markers such as race, gender, and sexuality, including how these intersect with socio-spatial distinctions.

Worldwide processes of urbanization—including in Pennsylvania—point to the increasing complexity of human and non-human relationships both within cities and between urban and rural areas (Brenner and Schmid 2015; Fox et al. 2017). Cities, city regions, and the surrounding more rural spaces are mutually dependent and intensely interconnected and interrelated (Davoudi and Stead 2002). Urban residents tend to be more reliant upon rural farmers for food production, while urban economies might offer employment opportunities that farmers and farm families rely upon for supplemental household income. Rural–urban interdependencies, whether in agriculture, economic and business development, environmental and natural resource management, human health, or infrastructure point to many relevant areas of focus for extension across urban and urbanizing landscapes. The complexity or "wickedness" of many urban issues also points to the need to recognize and integrate the knowledge and expertise both held by *and* extended to urban and rural residents and communities; it demands engagement with complex histories and geographies.

The historical geography of urbanization, shaped in part by agricultural production and agri-food system development (Glasser 2018; Jacobs 1992), is mutually constituted by many other socio-political and spatial processes, including those of racialization and racial exclusion (Brahinsky et al. 2014). For this reason, scholars across the social sciences highlight the importance of engaging and partnering with a variety of urban stakeholders to build more sustainable and just cities (Fainstein 2014). The emphasis is on reaching populations that have been historically sidelined from Extension programming and continue to be underserved by both Extension and affiliated federal agencies, such as the USDA (Gilbert et al. 2001; Mitchell 2001; Reid 2003).

It is not only the technical scientific rationality and substance of Extension professionals' practice (e.g., mushroom

[2] Two separate pieces of legislation in 1862 and 1890 helped to establish, through land scrip and direct appropriations, a system of land grant universities (LGUs) that have served predominantly White and predominantly Black students, respectively. In 1994, a separate piece of legislation established a much smaller appropriation to support Tribal colleges and universities.

production or craft brewing entrepreneurship) that scholars of Extension and engagement grapple with, but also the ways in which expertise is conceptualized and utilized by Extension within a democratic political system. The pressing question, then, is about the relevance of higher education and of Extension within that system (Dzur 2004, 2008). Scholars continue to grapple with the scope of extension educators' democratic responsibilities in their engagements with the public, specifically around what Dzur describes as a "task-monopoly" (2004, p.6). In other words, is the work or "tasks" of laypeople being brought under the expert purview of professionals, in turn devaluing residents' and community members' knowledge and expertise?

In addition to its relationship with democratic praxis, scholarship on urban Extension practices and programs continues to examine questions of relevance and rigor (Fox et al. 2017; Collins et al. 2018; Barth et al 2008; Young and Vavrina 2014). Miller et al. (2019) find that urban educators need to hone a set of competencies and tools to work effectively in the complexity of urban settings. A Ford Foundation study (1959–1965) showed that urban Extension programming served as a platform for ideas and policy expertise related to programming that was separate from any specific political agenda. Citizen participation in the context of concentration of low-income families in racialized "inner-city" areas reinforced the need for relevant Extension programming that engaged with and reflected contemporaneous political ecologies of urbanization. This suggests that the capacity of Extension to adapt educational and research-based programming to the prevailing needs of urban socio-spatial and political contexts is crucial to its continuing relevance as an institution at all scales. Miller and colleagues (2019) suggest that respecting all people, co-creating with community, collaborating internally, collaborating externally with community members and organizations, navigating tensions thoughtfully, and learning continuously are central to this adaptive capacity.

2.3 Urban community resilience

Implicit in these questions of democracy, reciprocal and democratic engagement, and the co-production of knowledge are broader issues of social and spatial justice (Harvey 2014; Israel and Frenkel 2018; Iveson 2011; Soja 1980), access to and distribution of resources, as well as questions of power and privilege in decision-making processes (Ansaloni and Tedeschi 2016; Finewood 2016). Issues of access, power, socio-spatial justice, and resilience are analyzed and understood in this research with a specific focus on the engagements between universities and urban communities, and the consequences of such engagements. Examining resilience through a lens of power, democracy, and equity is essential to understanding *how* resilience works in urban communities, *for whom* resilience works, and *how Extension practices* can contribute to or hinder development of adaptable, stronger, and more resilient communities in the face of change (MacKinnon and Derickson 2013; Meerow and Newell 2019).

Attention to power and justice, including who has a voice in conversations about urban issues and policy making, can help contribute to an urban resilience grounded in equity. Moroni (2020) argues that justice must encompass democratic political rights not limited by a scarcity lens or zero-sum framing. This is echoed in Ziervogel et al.'s (2017) call for "meaningful participation in decision-making processes" as integral to their vision of the just city and Archer and Dodman's (2015) argument for greater attention to be paid to "who sets the agenda" for policies and response strategies. This literature points to the need to reimagine the relationships between universities, Extension, local decision-makers and systems of governance, and communities, including redefining "expert" roles among these groups, recognizing epistemological pluralism in engagements, and acknowledging the multifaceted forms of knowledge held by community members.

2.4 Extension in the city: politics of knowledge, epistemologies of practice

Scholarship on Extension practices indicates uneven responses to the existential question about Extension's continued relevance, socio-spatial reach, and scope and practice of engagement. Broadly, Extension programs have sought to regain political support and secure public funding by including a broader array of programming, and to expand access through digital technologies, which has been particularly important during the COVID-19 pandemic. Technological innovation has the potential to expand the reach of Extension if attention is paid to questions of equity related to broadband access, technological knowledge gaps, and how communities prefer to access information (Bruns and Franz 2015).

Broadening and deepening Extension's urban engagements must extend beyond questions of technology or platforms for program delivery. Indeed, questions of access to Extension's offerings are crucial in both urban and rural spaces. However, the complexity and density of non-profit organizations and nonformal educational opportunities in many cities mean that for Extension organizations to be successful in reaching audiences, they must be intentional about how to meet urban audiences where they are. Julie Fox, Director of Strategic Initiatives and Urban Engagement on Ohio State Extension's leadership team, writes that "organizational competitiveness (is) an essential factor in urban communities where thousands of agencies, businesses, and nonprofit organizations vie for limited resources and champion their causes in a congested environment" (Fox et

al. 2017, p. 23). Given this context, technological advancements may seem reasonable; however, a "tech fix" does not develop human social competencies, including interpersonal, personal, business-related, and program management competencies, or expand opportunities for deep engagement within and across communities. The development of professional competencies in urban settings has been identified as crucial to the continued success, relevance, and expansion of extension in urban areas (Miller et al. 2019; Deen et al. 2014; Fox et al. 2017).

In terms of *how* to engage in urban spaces, collective impact theory provides insight into how community development and resolution of social issues are achieved through processes of collaborative problem solving (including input, reflection, and feedback). This can be applied to engaged models of working; indeed, the scholarly praxis of "action researcher/public scholar/education organizer tradition[s]" connects universities more effectively to local communities (Peters et al. 2010; Vines 2018). This approach to engagement values two-way learning processes that champion citizen participation in identifying, researching, and solving local issues/needs (Ibid). These types of university-community connections have the potential to be mutually beneficial (Vines 2018; Fox et al. 2017; Miller et al. 2019; Tiffany 2017) as long as negotiated power relations do not leave communities feeling powerless, but rather affirm the value of all stakeholders. In other words, to advance their work, educators and university personnel need to work collaboratively with residents and urban organizations and build relationships of mutual respect with partners.

Mutual respect and effective engagement, especially in spaces of great diversity (racial and otherwise), require centering the knowledge and needs of individuals and communities, in alignment with collective impact theory and epistemologies that recognize and validate alternative and traditional ways of knowing (Vines 2018; Fox et al. 2017; Franz and Cox 2012). What Stephen Healy refers to as the "hegemony of scientific rationality" construes some forms of knowledge as unquestionable and simultaneously silencing others, while also prohibiting democratic forms of engagement and knowledge production, and often stymying innovation (Healy 2003). Rather than embracing "epistemological pluralism," (Healy 2003) Extension has traditionally followed the expert model, assigning itself the role as primary producer and distributor of knowledge in interactions with communities, with a mostly one-way flow of information (Franz and Cox 2012; Vines 2018). This (pedagogical) approach fails to empower communities and is reflected in the transposing of rural extension programming into urban areas without consideration of the unique context and needs of individual communities.

Democratic engagement in cities that embraces "epistemological pluralism" would demonstrate Extension's capacity to adapt to and understand contemporary urban political ecologies. A pluralistic approach to knowledge and knowledge production would bolster efforts to reach more diverse audiences and to expand beyond some of the traditional Extension practices that at times reify stereotypes about the professional and socio-cultural roles of particular groups (e.g., women, BIPOC groups) (Reid 2007; Trauger et al. 2010; White 2018). Scholarship that deals with ontological questions of what Extension is (i.e., is Extension a purveyor of technical agricultural knowledge or a facilitator of democracy building through education and engagement? [Archibald 2019]) and epistemic questions of what and whose knowledge is valued, and therefore should be "extended," is especially salient in cities and city regions. These issues are central to translational research praxis grounded in epistemic pluralism, knowledge democratization, and social construction of knowledge and praxis.

3 Methodologies informed by epistemological pluralism

Our research examines the efforts and engagements of Penn State Extension in urban Pennsylvania, both what is and what might be, through the lens of translational research and engagement. We draw upon methodological frameworks that center the lived experiences, perspectives, and practical knowledge of individuals participating in and impacted by life in urban settings and urban Extension programming. Through interviews with extension educators, staff, extension affiliated faculty, and community stakeholders, this paper identifies gaps in and opportunities for strengthening processes of translational research and extension shaping PSE and affecting the communities it intends to serve. While we focus on the knowledge and experience of university professionals, our research also engages with urban community stakeholders and community–university relationships, with relevance to any university or research institution whose work is intended to serve communities or residents.

Our methodological approach is grounded in philosophies of epistemological pluralism. Bent Flyvbjerg's interpretation of phronesis provides the specific methodological underpinning for this research, privileging knowledge that is more than just technical or scientific. That is, experiential knowledge might provide insight for understanding the impacts of organizational and societal structures and processes, including relationships, power dynamics, issue definition and inclusion, questions of efficacy and justice, and the individual, organizational, and societal implications of these factors. Phronesis, rooted in a praxis-oriented epistemology and theory of science and methodology, aligns with Healy's epistemological pluralism and offers an understanding of

power as relational and shaped by the politics of knowledge (Healy 2003; Flyvbjerg et al. 2013).

Developing an understanding of how power operates in various settings is central to our methodology because of the crucial but often less visible role that power plays in developing translational research and engagement relationships, as well as effective, just, and democratic Extension practices and structures. For example, how does Extension create space for community members to participate in and share their knowledge and experiences? Achieving "meaningful participation" (Ziervogel et al. 2017, p. 2) within Extension practice requires reflection on the broader politics of knowledge. Grounded in this methodological perspective, our research explores the potential for extension educators, faculty, and community members to collaboratively strengthen the translational underpinnings of their individual and collective work, specifically in urban areas.

This research reflects a particular politics of knowledge, related to the concept of epistemological pluralism described above. At its core, the research is itself a form of translational and extension praxis. Flyvbjerg outlines processual ethical requirements, or discourse ethics, that exemplify a normative stance on engagement, knowledge translation and co-production, and ethical research. These include equal autonomy, inclusion, empathy, attention to power, exploration and discussion, and transparency (Flyvbjerg 2001, p. 91) and act as guideposts for the methodology and methods of this research.

We draw upon data gathered from sixteen semi-structured, key-informant interviews with PSE educators (current and former), faculty, and administrators. Each interview participant focuses on urban issues and people for at least part of their work. For many, urban is their sole focus. The sample, which was two-thirds female, represents Extension-affiliated personnel—educators, administrators, faculty—with programmatic and research responsibilities in urban agriculture and horticulture, 4-H youth development, and nutrition and health. Interviews with community stakeholders have helped to shape our research; however, data from interviews with community stakeholders are not included in this paper. Through open-ended questions, researchers explored PSE's current and former engagements in urban Pennsylvania, organizational structure, programmatic relevance, innovation, and collaboration, as well as specific questions related to programmatic and educational interventions.

We used convenience, reputational, and snowball sampling methods to gather participants whose work cuts across a variety of focus areas and urban geographies. These interviews offered new understandings of the way in which urban extension functions and the impacts of organizational structure and culture on translational research and engagement practices. We analyzed interview transcripts using both individual and collective thematic narrative analysis techniques (Braun and Clarke 2022). The overarching themes identified and reported below reflect commonly held perspectives expressed in nearly all individual interviews, and no interviewee's perspectives ran counter to these themes.

4 Results: findings and implications

While interview responses varied significantly due to geographic, substantive, experiential, and personal differences, similarities among respondents were often more telling than differences. Our findings reflect the following themes: shifts in organizational structure, (dis)incentives impacting collaboration and innovation, epistemic differences (i.e., tensions between expert and local knowledge), building community relationships within the city, and the need to do extension differently in urban spaces. Our findings point to the unrealized potential for extension professionals to work collaboratively across the university and together with community residents to build adaptive capacity and resilience within and across urban communities. Findings also suggest a need for reflection at an organizational level, with the goal to shift organizational culture and structure to promote greater educator autonomy, dedicate more resources to extension in urban PA, foster a culture of epistemic plurality, and incentivize relationship building and collaboration internally within PSE and Penn State's College of Agricultural Sciences and externally with the communities and stakeholders that Penn State serves. While grounded in a small sample and recent experience, our findings provide perspectives and suggest issues and questions pertinent to translational research, extension, and engagement practices beyond the PSE experience. In reporting these findings, pseudonyms are used instead of individuals' names, and at times, specific identifying details (such as gender) have been changed to respect the confidentiality of interviewees.

4.1 Shifts in organizational structure

The historical relationship of PSE in cities emerged as an important focal point in discussions about shifts in organizational structure starting around 2017. These changes to the organizational schema of extension together with the closing of two urban centers and the simultaneous loss of several urban extension educators not only dramatically altered Penn State's urban presence across Pennsylvania, but deeply impacted the place of urban engagement within PSE in the Commonwealth. Participants reflected on different types of extension practice and organization. One urban horticulture educator, Inez, described how "local offices had more autonomy" before the structural shifts, which "consolidate(ed) leadership" taking power away from local offices. In practice, this meant removing county

directors, effectively replacing them with Client Relations Managers and Business Operations Managers, "who were doing what [the county director's] job was except trying to do it for [a city], and four or five other counties." The organizational changes subsumed urban areas into one of ten larger regions under the purview of one or two people in leadership positions. This had the effect of diminishing the role and influence of educators' local grounded knowledge within the places where they work.

Central to this new model was the transition to a business structure that "revamp(ed) what [program] teams did and how they functioned, [including] money generation." Robert, a former urban horticulture educator, framed the move toward a fee-for-services model as "fundamentally chang(ing) how we support communities or people growing food. [We're] chasing a dollar that we're not going to get [in these places] because nobody has any interest in [statewide programs such as] pesticide education." This perspective highlights how structural changes impact the relationship of PSE to community members, especially regarding the role that local knowledge and lived experience should play in determining extension programming and engagements in a democratic translational research and extension praxis. It underscores a lack of understanding within PSE about the needs, perspectives, and everyday lived realities of urban residents and potentially undermines the ideal of democratic engagement internally and with the communities we serve.

Rachel, who focuses on urban food system development, described the structural shifts in terms of the internal relationships within PSE, specifically those fostered through monthly cross-team meetings. She notes, "There was a lot more structurally in place to provide connections between us. And then we stopped doing that…a lot of that just disintegrated. I think it was a purposeful shift away from that, but I'm not clear on all the reasons." Monthly all-staff meetings brought educators together across teams, projects, and programs, to talk about and share their practice. In an urban context, where the complexity of issues cuts across traditional program areas (e.g., Horticulture, Food and Nutrition, Community Development, Integrated Pest Management), regular connection gave educators a feeling of being "part of a team." Cross-team connections allowed Rachel to "[know] all of the pieces that were going on in my place [so] that where I fit in was a lot clearer to me." Working across teams was described by many educators as important for communication, collaboration, creativity, and innovation that contributed to extension's community relationships, relevancy, and effectiveness in urban spaces.

Robert echoed Rachel's perspective, emphasizing the broad influence of organizational structure on urban extension programming:

> Prior to [the changes], the [local extension] director led a team. That team supported each other to do work around [the city], and we often did work in the same neighborhoods, so that Nutrition Links was working with horticulture and 4H. (...) I came to realize that that's not how it worked in the rest of the state. My contemporaries didn't have conversations with the people in 4H or…Nutrition Links.

The limited practical capacity to collaborate under the new model reflects shifts in organizational priorities and incentives in terms of cross-team collaboration and innovative praxis, including relationships among faculty and field-based extension educators. According to numerous interview participants, this shift toward more siloed practice was not accidental, but rather a purposeful shaping of organizational culture. Robert related that even talking about collaboration in staff meetings would elicit "chastise(ment)…to the point where we just stopped talking about it because it was so against that model. […] As years passed, we became more and more siloed. We were encouraged to be more siloed in a way that just felt wrong."

Strong, "thick" socio-spatial intra- and interorganizational relationships and networks are central to building urban community resilience. Processes of reorganization have undercut PSE's ability to foster "thick" engagement and productive relationships within extension and the College and with the people, communities, and interests it serves, deeply impacting PSE's effectiveness and political standing in the community. Within the context of a translational research and engagement framework, this outcome weakens the voice of community members and centers so-called expert knowledge systems (Healy 2003). This narrows and limits the diversity of knowledge, ideas, and insights, and inhibits effective processes of collaboration, innovation, and co-creation between communities, extension educators, and Extension more broadly.

4.2 Collaboration and innovation

The path dependency of siloed work is effectively a barrier to relationship building and innovation, not just internally between and among extension educators and faculty but with community members. When educators and faculty do not know what others are doing across the system—or are not empowered to have cross-team or interdisciplinary conversations—opportunities for creative and innovative collaboration are limited. The system must encourage and incentivize collaboration in order for creative, innovative ideas, research, and extension initiatives to happen consistently, including between educators and faculty. Many educators indicated that what brought them into working for PSE was the attractiveness of the university and the possibility of such collaborations with university faculty.

Marissa noted, “In the system of checks and balances, gate keepers, and gated activities like marketing and branding, innovation just dies.” She continued, however, that working outside of the system, especially “in the setting of community collaboration,” is one pathway to innovative work. For Marissa, this has included sitting on collaborative and community-based organizational boards. While PSE might be at the table, Marissa said that Extension's collaborative capacity, whether with service-providers, residents, or communities, was limited by the need to “justif(y) to marketing” why it was important to provide a service or collaborate with certain groups.

Other educators also expressed frustration with an organizational culture they perceive to disregard the importance of building and sustaining strong interpersonal, interorganizational, and *intra*organizational relationships embedded in the diverse contexts of urban community issues. Such democratic and engaged relationships provide the enabling settings for collaboration at the intersection of different ways of knowing, understanding, and experiencing the world (Johansson 2006). This suggests that extension must be “of” the communities it serves not just “in” those communities, fostering the co-creation of initiatives that address community interests and build community resiliency. In dynamic urban environments with many sources of information and support, Extension's relevance and effectiveness are inhibited by organizational disincentives to build relationships and trust, a lack of long-term commitment to the community, and minimal agency for educators to adapt and innovate at the local level.

The perceived bureaucratic “red tape” in the current PSE organizational iteration is onerous for urban educators. Rachel talked about the need to advocate internally on behalf of urban extension to gain broader support from the college and Extension. The feeling of being “in it alone” also extends to the effectiveness of programming and program implementation. Rachel commented:

> …the effectiveness of urban educators is entirely in the hands of that educator. The answer to, "Well, we don't have any programming about urban soil health" is… "Create some programming about urban soil health." And then if you have an educator who isn't an expert in that…then nothing is going to happen. We need to have some external support or support from higher up…to actually help people move forward.

The fundamental question is whether Extension has the capacity *and* the political will to support innovation that can meet the expressed needs of the communities where it operates. Innovation and adaptation to community needs are central to the issue of translational research and engagement praxis. This praxis implies and requires robust two-way flow of ideas grounded in differing views of the world and ways of knowing, commitment to collaboration and co-creation of initiatives and how to pursue them, and adaptability by all partners.

4.3 Epistemic difference: expert and local knowledge

Traditional models of Extension tend to align with its name. That is, extending knowledge from the university to the people. While information transfer and technical assistance have their place in Extension engagements, this practice does not cover the range of necessary engagement within community, and especially not within urban communities who, historically, have not been fully “on the radar” of Extension. Information transfer reflects a one-sided and incomplete approach to translational research and extension praxis. The community development or community engagement model of Extension, or—to push it even farther—a collaborative and co-created model of Extension that is embedded in the community and works with and for the community would demand an approach that effectively democratizes knowledge and flattens knowledge hierarchies. This approach reflects a democratic politics of knowledge that recognizes and acknowledges value in a multiplicity of expertise, experiences, and perspectives as opposed to the more top-down or autocratic politics of the traditional approach to extension education.

Anthony, a long-term educator in Extension articulated this point through an example about what the goals and substance of a particular program *should be*, and the process that might be required to meet the needs of community more adequately:

> There's a tendency in any large organization, academic or otherwise, to do community work with a sense of hubris. I think when you go and you think, "Oh, we want to start a 4-H club [in the city] because we want the youth there to be more community-engaged, we want them to be future leaders," in isolation, in a conversation amongst staff, that sounds like a lovely idea. But when you talk to the community, to the parents and the educators, and to the teens themselves, you realize these kids are really suffering right now. They're hungry. Their parents have lost their jobs. They need something else. They need to be able to just go to a safe place and play a game, for God's sake. […] I think without the community engagement, you can completely miss the mark and miss the opportunity, and therefore just confirm that urban extension is more difficult than in any other place.

Anthony is not the only educator to reference the idea of "who knows best" in the Extension-community relationship.

Evelyn reiterated the same idea that Extension cannot assume they have the right product or the ready-made solutions for any issue. She explained:

> in the urban [context], you could have a comprehensive intervention, but…you have to make the case and you have to show why you're the group that can do it. You can't just say, "This is what we have." You can't tell people what to do. I think you need to work with [communities] and you can't tell them what you think their problems are. They need to identify that through a process with you and then collaboratively how you can intervene around that. And Extension really doesn't have, as far as I know, any collaborative planning process around that. They have a product; they deliver a product. It's not like, "What are the issues?"

Thus, the epistemic issues go beyond the substance of a program to also include the nature of the engagement itself and how programs or services are delivered.

Speaking about predominantly Black youth audiences, a former PSE urban educator said that Extension, as an institution, is not particularly designed to speak to diverse audiences. "The language, the vernacular, not just a literal word, but even in the non-literal communicative posture. It doesn't adapt itself. It doesn't seek to understand; it seeks to be understood. […] There's very little, if any, mechanism that's designed to get feedback from the public as to what it is that you're interested in. And what is it that you need?" The lack of responsiveness to community needs as well as a sense of inflexibility to adapt programs emerged in many interviews as a key challenge to effectively serving urban audiences. Inez described the ideal program structure for a horticulture program as "grower led and Extension supported" where Extension educators work "together with growers both to highlight their expertise and bring Extension resources to bear on their work and increase knowledge and education in that way in partnership with community." Rhonda reiterated that Extension work should exist in "places of co-creation and collaboration, because the wisdom, and the knowledge, and the history, that are in cities, in urban areas is just rich beyond belief."

Urban agriculture, youth development, environmental quality, nutrition and health, and other public issues are complex, contested, and often intractable. The meta-politics of knowledge, however, has great significance for determining how these problems are understood and framed, how they are acted on, whose interests are served by those actions, and fundamentally who owns the problem and consequent actions. These praxis-oriented considerations are perhaps even more challenging than the issues themselves. There is power in the meta-politics of knowledge: top-down approaches, in effect, disenfranchise participants whose voices are not heard. This lack of voice may cause those participants to disengage. Genuine, democratic engagement must be built on a meta-politics of knowledge that respects and values the experience and "expertise" or practical knowledge of the people (and their interests) who have a stake in the public problem or issue at hand.

An irony is that by attempting to unilaterally deploy scientific and technical expertise—expertise that is indeed invaluable—on critical social issues without exploring the practical expertise of community members, PSE undercuts its standing within communities, and ultimately harms its translational research and extension mission as well as that of the university. The organizational incentives of a top-down, unilateral epistemology of practice and politics of knowledge and the resulting consequences for community members, urban extension programming, and organizational standing are a consistent theme in our interviews across our sample of PSE field-based educators, faculty, and administrators.

4.4 Building community relationships in the city

Building relationships is the most prominent theme that emerged and is interwoven throughout the other themes elucidated here. Educators, faculty, and administrators alike spoke of the need to connect with people, to take the time to get to know them, their lives, their struggles, their dreams. Extension, through this lens, is not simply an educational platform, but rather a place of relationship-building, trust-building, and democracy building. In programming with urban youth, Margot, who works in youth program development and delivery, emphasized how crucial it is to have a long-term commitment to place. "It's the sustainability. How much is a 'one and done' in urban programming? How much is we come in we do this thing, and we never see these kids ever again? I'm working with these kids from fifth grade, sixth grade, seventh grade, eighth grade, high school. You need to be by their side. This isn't a 'one and done'."

In the context of urban extension, this element is all the more crucial because of widespread lack of trust and sense of abandonment that urban residents feel regarding institutions of higher education (Tiffany 2017). For the youth with whom Margot works, programming such as 4-H cannot mirror the lack of consistent and healthy adult presence in their lives if the aim of 4-H is to achieve long-term participation and impact. Building relationships and building trust go hand in hand with consistency and sustainability of the presence in a place.

This critical importance of relationships and relationship building goes far beyond the context of a particular program or subject-matter areas. Relationships and relationship building are at the heart of engagement, community-building, democracy-building, and urban community resilience. Deeply democratic engagement is a vehicle for relationship

building; bridging holes in the connections and networks among people and groups, those concerned with narrow as well as collective community interests; and bringing new information into public discourse which helps deepen understanding across differences and foster creativity and new insights, thus building community. Relationship-driven community engagement and development ensure extension program relevance and organizational standing in the near term, but it also builds the platform for future extension program development and delivery. Perhaps most importantly, it builds resilient socio-political and cultural relationships positioning community members and communities to respond to future disturbances and challenges beyond the purview of Extension. Most interviewees flagged the perception that relationship-driven urban programming and community development were not valued organizationally within PSE and that this perceived reality has detrimental impacts on urban extension program development and organizational standing.

4.5 The need to do extension differently in urban spaces

Articulated in different ways across our interviews is an urgent appeal to do things differently in cities and city-regions. That appeal takes the form of nostalgia over how things used to be with more robustly staffed urban centers, as well as a lifting up of the collaborative work supported under more local leadership. However, it is also a forward-looking perspective that embraces disruption, change, and innovation of some of the traditions to which Extension has held tightly. The same educator that spoke about diversity argued that by not changing its approach, Extension becomes less relevant:

> The whole approach is dated. It needs an overhaul. […] Everybody [else] is trying to become more current, and yet…on some level, there are probably people who are so positivistic that they pride themselves in not changing. So, maybe it's some of that. […] I do think that there's an identity issue, that there's a language issue and it creates a relevance issue. It makes you less relevant if people don't understand what you are, who you are, and what you can do for them.

Rhonda imagined what an innovative future in Extension might look like in the city, one that holds on to elements of what is, but expands upon a possible future of what could be, rooted in the conditions of a place:

> It's certainly nutrition ed, it's urban gardening, it's soil testing, it's urban agriculture, it's pest management, it's youth programs, it's huge opportunity for business innovation. Think about what's gone on in [post-industrial] cities over time. There's opportunities for all kinds of literacy learning, health, money management, finances, the list goes on and on. So, I see that we have a tremendous opportunity to work with people in cities.

Imagining the "what" also goes hand in hand with the how. While urban and rural places might face similar issues (climate change, water quality concerns, poverty or low-income), the underlying causes of these issues and how communities approach them are often different. This demands new understandings and a willingness to take risks on how potential solutions are developed.

According to Margot, the "how" of effective urban engagement has to do with building relationships, understanding the needs of community members, and grappling with how to meet those needs most effectively, which might not look like traditional Extension, such as career development through Extension.

> [Extension is] where [agricultural and science] jobs are developed and thought up, dreamed up. […] Yet they're not offered to the people who need them the most. You need [educators] doing other pieces in the community relate[d] to the work that they're doing [in career development] to expose people to those options, to understand them. But there isn't that.

Doing Extension differently is about innovation, risk taking, and collaboration across disciplines, geographies, and sectors. It demands a reflexive praxis that not only embraces epistemic pluralism but engages in democratic processes of breaking down knowledge hierarchies. Both objectives are part of a praxis rooted in equity. In other words, to engage effectively across difference—to move the needle on some of the most complex issues facing urban spaces and communities—Extension (both the systems and individual educators) cannot pretend to hold the monopoly on expertise and knowledge production. There is a value in the scholarly knowledge produced at universities across the land-grant system. However, that knowledge does not inherently hold more value than local, indigenous, and community-based knowledge, expertise, and experience. It also must be produced and deployed in a collaborative manner so that it is legible to, co-owned with, and responsive to the needs of communities. Robust and authentic relationships supporting democratic collaboration and co-creation are foundational to translational programming and practice and to the development of greater resilience within communities. They are foundational to the democratic ideal of land-grant universities as well as the societal obligation and responsibility of these universities; they constitute the “why” for the “what” and “how” of translational research and engagement programming and practice in urban areas.

5 Conclusion

There are ideals of urban engagement that emerge from our interviews: of power sharing and empowerment at all scales across extension and within communities, of epistemic plurality and democracy of knowledge production, and of striving to do and be better, both in communities and as an organization. The definition of urban community resilience presented at the beginning of this paper is one that emerges dynamically and continuously from processes of engagement. The capacity to respond to systemic crises and shocks—to approach challenges and problems with an adaptive capacity and collaborative mindset—is embedded in the democratic potential of Extension. The perspectives outlined above point in the direction of a reflexive, adaptable, and innovative praxis that strives to meet that potential and supports an effective, dynamic, and democratic system of translational research and engagement.

The concept of praxis that is interwoven in the epistemological and methodological framing of this research as well as in the normative positioning of Extension work that we present attempts to bring together community, educator, and faculty knowledge (whether experiential, scholarly, or theoretical) into some form of action. Translation between forms of knowledge and the forms of engagement necessary to make that happen align well with the Extension system. Indeed, that is the promise of the land-grant ideal: to bring the university to the people and engage the people in the workings of the university. Our interview data uncover elements of translational research and engagement praxis — whether formally supported or not — that can be integrated into current organizational structures and practices and privileged in internal and external relationships. In the context of urban extension in Pennsylvania, this article highlights concerns about organizational structure, incentives, collaboration, and innovation, prevailing epistemic politics, and approaches to relationship building in the city. Several promising suggestions for addressing these concerns are also highlighted. Central to acting on and advancing these suggestions is fostering and nurturing broad-based organizational commitment and culture supportive of genuinely democratic engagement among extension educators, faculty researchers and their research, and with the urban communities that Extension purports to serve.

Extension praxis should be at the nexus of the translational process and is central to building individual and community agency and fostering democracy—crucial elements of community resilience. Meerow and Newell draw attention to power dynamics in building urban resilience, asking, "Whose vision of a desirable resilient future prevails and who benefits or loses as a result…?" (2019, p. 317). Extension organizations and universities across the US must closely examine their engagement practices considering this question. Whose resilience counts? The philosophical, intellectual, educational, and organizational leadership foundational to achieving the land-grant ideal, obligation and promise (regardless of community location) can provide solid grounding for a praxis of co-creation necessary for building more resilient urban communities. This outcome is not guaranteed, however, without commitment to truly democratic processes and practices of translational research and engagement.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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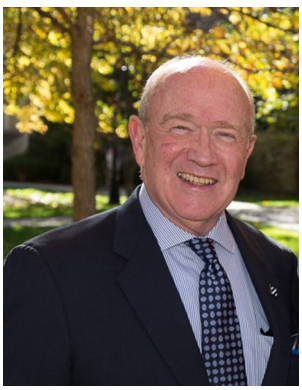

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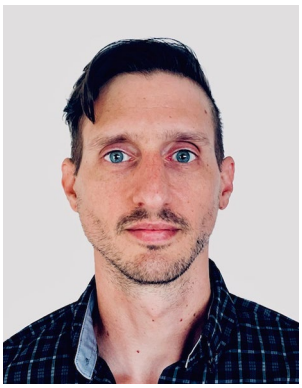

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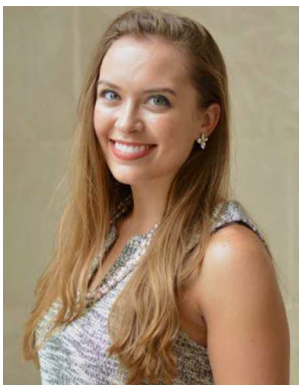

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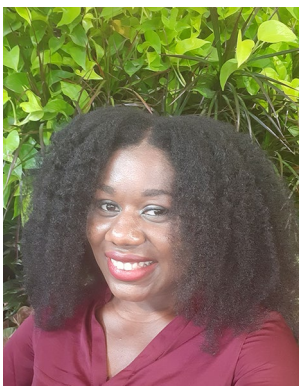

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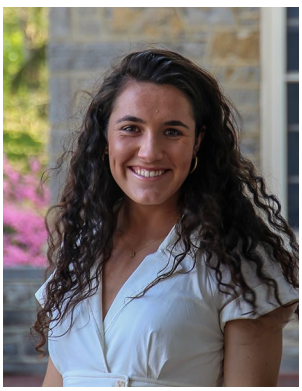

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