

Community Autonomy and Place-Based Environmental Research: Recognizing and Reducing Risks

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Abstract

Academic and government-directed research is generally portrayed as a benign problem-solving enterprise. There is a long record of important theories, discoveries, and solutions to sticky problems that research has produced. But alongside this list of important advances in knowledge, there has been a record of damage to individuals and to communities as a whole when place-based research has not been implemented thoughtfully. Researchers conducting community-facing projects are increasingly aware that place-based research may generate risks at a community level. This literature review identifies a set of dynamics through which place-based environmental research projects can undermine community autonomy where research takes place and offers a set of recommendations for researchers and institutions who wish to adopt research practices and institutional supports that honor community autonomy.

Keywords: place-based research, research ethics, environmental research, community-based research

Introduction

Place-based research in fields like ecology, environmental engineering, environmental health, and others can introduce harm and risk to human and nonhuman communities implicated in or simply situated at or near research sites. But the institutions sponsoring this research are only beginning to grapple with developing ethical practices addressing the community-level risks generated by academic research. The history of abuses in biomedical research against vulnerable individual research participants is well known and prompted legislation in the United States during the 1970s to protect human research subjects better. The follow-on Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) laid out principles for human subjects research around respect for persons, beneficence, and justice. In the past few decades, participatory action research (PAR) and community-based participatory research (CBPR) methods have become routine, partly as a movement to democratize research. Especially in public health, many researchers (Flicker et al. 2007, Friesen et al. 2015, Friesen et al. 2017, Gilbert 2006, Kwan et al. 2018) have been calling for a rethinking of traditional institutional research board (IRB) processes and an expansion on the Belmont Report values to protect affected communities better, whether geographical or identity-based, when research has impacts like encoding a community in specific ways, exposing them to new risks, or undermining their autonomy.

Several public health researchers have observed that traditional IRB human subjects protections, while effective in protecting *individual* human research subjects in biomedical and behavioral research, fall short when it comes to defending the well-being of place-based *communities* implicated in research (Flicker et al. 2007, Friesen et al. 2015, Friesen et al. 2017, Gilbert 2006, Kwan et al. 2018). Environmentally-focused research shares some commonalities with public health research in that it is often place-based, with data collection and analysis relevant to human and nonhuman animal communities. Discoveries about localized environmental conditions have policy, economic, and public health implications, as well as an impact on community identity, cohesion, and agency. In addition, there is a great deal of environmental research that does not, at least nominally, incorporate human subjects or human communities and therefore does not feed through institutional IRB processes; these researchers are not formally asked to consider the impacts of their work on communities, even if that formal process inadequately grapples with community-level impact.

These factors combine with a set of converging dynamics in the higher-education landscape. The anchor mission movement among urban institutions calls on universities to align their business practices to support wealth building in neighboring communities; many such institutions are additionally undertaking a critical review of their research practices to identify and address ways in which research may exploit those nearby communities that have experienced disinvestment. A proliferation of community-connected climate and environment-focused research centers is

poised to expose partner communities to research endeavors that disregard community needs more frequently. Additionally, there are many well-intentioned efforts to leverage the work of faculty and students in service to partnering communities through “town and gown” networks like EPIC-N, Thriving Earth Exchange, University Climate Change Coalition, and the Urban Climate Change Research Network. Further, with the Biden administration’s pledge to address climate change with an explicit focus on the Justice40 Commitment to Environmental Racism (White House, 2021), there is some expectation of an increase in community-facing climate research funding and a concomitant rise in community exposure to research efforts that cause harm.

On the community side, local leaders across North America have become research activists, creating community IRBs and research review boards, and holding researchers and institutions who connect with them accountable for a baseline set of sound collaborative practices. Finally, universities involved in the movement of engaged anchor institutions and those pursuing anti-racism strategies in the wake of the 2020 uprisings are being called on by these movements to be better partners to nearby communities. One focus of this work is making changes to place-based research practices. An anti-racist approach and a justice lens on place-based research demand that researchers elevate community-level impacts and outcomes as part of the research process.

This literature review highlights factors that undermine community-level autonomy in communities affected by environmental research, whether as active partners or not. In addition to identifying this set of risks and harms, the literature also surfaces a set of recommendations for both researchers and institutions, which, when assembled, can act as a roadmap for institutional research administration offices that are looking for the right response to the converging trends that include a serious focus on anti-racist institutional practices and a proliferation of place-based and environmental research centers.

Methodology

This narrative literature review mainly incorporates work published since 2010, with a few exceptions for especially informative articles, and with an eye towards recent discussion in the realm of research ethics. Most of the content includes peer-reviewed articles, with a few editorial commentaries from relevant journals. Publications from community-based organizations naming problems in research processes and offering guidance to researchers are likewise illuminating. The literature search drew from databases like ProQuest Central, Sociological Abstracts, and ProQuest’s Biological Sciences, along with Google Scholar searches to identify additional material. Search terms used to identify literature that examines risk and harm in place-based environmental research include research ethics, environmental research ethics, conservation research ethics, decolonizing conservation research, decolonizing field ecology, and CBPR and PAR in environmental research. The search used some work from public health as a starting

point. The sweep of the databases unearthed approximately 35 relevant articles. The research team read each article to find discussions of harmful consequences of environmental research where place is relevant, as well as discussions that focus on recommendations for researcher and institutional responses.

Themes of Literature Review – Risks, Harms, and Recommendations

Undermining Local Autonomy and Exposing Communities to Risk and Harm

Place-based research can undermine community autonomy in several ways. From Holland's (2017) discussion of procedural justice and political capabilities in the context of climate adaptation policies, this analysis borrows the notion of capabilities to define community autonomy. In this use, community autonomy refers to the ability of communities to have power over and shape decisions about the issues that impact them, which consequently attracts researchers' attention. Research poses a set of risks to community autonomy for communities affected by place-based research, whether as active partners with researchers, as human subjects in the research, or as actors who are uninvolved in the research but simply live where the research takes place.

Many of these risks follow from failures by researchers to recognize that natural systems and organisms are entangled with human systems where ecological field research is concerned and, in general, a failure of researchers to understand their positionalities. When human communities are the focus of research, researchers can leave damage behind when they fail to grapple with the implications of their research on existing inequities. Following is a discussion of these factors.

Research Wastes Community Stakeholders' Time Without Generating Any Direct Benefit

In “parachute research,” researchers arrive at a community outside of it. They lack prior relationships, fail to engage community members impacted by environmental problems, and exclude them from research design. The research may employ residents for data gathering, which “diverts a community’s time, labor, energy, and resources...without providing perceived or accessible benefits” (Cordner et al., 2012). Parachute research can instigate conflict between community organizations and advance interventions and solutions that residents do not find practical or desirable. Further, data use without inclusive planning can have serious consequences “such as decreasing a neighborhood’s property values due to publicity of contamination” (p 167). The work of community-based groups like North Carolina’s West End Revitalization Association is derived from experiences with university-sponsored research projects that relied on community participation and informants. These projects generated career advancement for investigators who retained control of project data and publications but provided

the community with no tools for problem-solving (Wilson et al., 2007). Dynamics like this drive a sense in communities of being over-researched. They have prompted community-based organizations in cities like Chicago (Chicago Beyond, 2018) and Salt Lake City (Community Research Collaborative, 2021), who frequently interface with academic researchers to produce guidelines for investigators to work in these communities in more thoughtful ways.

Research Trivializes Community Narratives About Experiences of Risk

When research characterizes the environmental or environmental health conditions of a community or place, it has repercussions for that community's accounts of their experiences and ability to organize based on those accounts. As Ottinger (2013) observes, Scientifically derived data has been used to undermine an environmental justice (EJ) community's capacity to develop and tell its own stories as community members navigate their own identity and choices in the shadow of industrial emissions.

Research Enshrines Narratives About a Place that Reproduces or Reinforces Unjust Power Arrangements

Tuck (2009) discusses "damage-centered" research that starts by documenting deficits in a place. This approach is damaging insofar as the challenges faced by a community can come to define it. Damage-centered research relies on a theory of change. If authorities can understand the dimensions of a community's poverty, health status, or environmental exposures, processes will subsequently occur to address and solve the problems. But, Tuck argues, there is no good evidence that this ever actually happens. Friesen et al. (2017) point to a public health study that shared alcoholism rates in an indigenous community which consequently had its credit rating downgraded. One can readily see a corollary in research that shares the adverse health impacts of local environmental conditions without attendant community planning and response.

Researchers' assumptions can also generate damaging narratives. When ecological field researchers based in Global North institutions do fieldwork in Global South places, they can bring unexamined assumptions about their expertise and power. "In a sense, field research can be a colonial exercise, in which an incoming set of established researchers impose an agenda and a set of practices that reflect uneven power dynamics. Ecologists from the Global North must critically examine the ways in which they conduct fieldwork and how they relate to and reinforce existing inequalities" (Baker et al. 2019, p288). When researchers have carried unexamined assumptions about the qualities of ecosystems and local land practices into their research and publications, it has justified oppressive practices.

Justifications for colonization were often derived from researchers' narratives about indigenous land use practices, framed in environmental research as irrational and destructive. This type of

environmental history was codified around the same time that ecology was becoming an established discipline. “Despite their inaccuracy, colonial environmental narratives became institutionalized and legitimated by ecological science through the provision of scientific proofs in the descriptions, maps, and data of colonial botanists and ecologists” (Skandrani, 2018, p. 369). This dynamic of extraction-by-narrative is not relegated to the past: as Seamster and Purifoy (2019) demonstrate, the social construction of Black communities today as places of environmental degradation is, somewhat perversely, part of the placemaking dynamic for White spaces and communities.

Research Exposes Human Respondents to Personal, Physical, and Financial Risks Due to Information They Disclose About Local Environmental or Conservation Conditions

Cooper et al. (2019), looking at citizen science research, identify a set of risks to citizen participants in research ranging from physical risks connected to data collection, psychological distress, and loss of efficacy when their contributions and ideas go unacknowledged, or they lack access to research outcomes and loss of confidentiality when personal situations and locations are revealed in data. Yet, despite these risks, researchers leading citizen science projects rarely employ consent processes with local participants.

Considering conservation research that engages local human informants, St. John et al. (2016) discuss the ethical survey and interview research practices in situations where informants may have engaged in illegal activities like poaching. They emphasize that when privacy protections are inadequate, the research process can put these informants at risk when the data exposes them to encounters with law enforcement.

Research Introduces a Unique Set of Risks and Harms to Indigenous Communities

Research has posed existential threats to indigenous communities. Held (2019) recounts a dual purpose of environmental research in indigenous spaces meant to lay the groundwork for private resource exploitation as it described environmental features. Accompanying social science research, per Held, eased the way for cultural assimilation. Harding et al. (2012) consider ways in which researchers, primarily engaged in environmental health projects, have abused the trust of tribal nations. “Few nonnative researchers possess an awareness of Native American culture and belief systems, including the continuing effect of American colonialism on the peoples they seek to study” (p. 6). There are important differences in how western research enterprises and tribal nations handle data ownership, management, and dissemination, for example. In the Western academic tradition, the researcher owns the research data and is free to disseminate it. Among tribal nations, data about the community is the community's property, with limits on sharing. This makes standard IRB protocols allowing the researcher to use and publish tribal information as they wish inadequate. IRBs do not commonly incorporate guidance on intellectual

property rights, nor do intellectual property rights reviews, when they exist, take on board IRB principles of beneficence, justice, and respect of persons. Human subjects IRBs also do not consider tribal sovereignty or aboriginal rights. “American Indians’ circumstances present situations that require greater efforts at informed consent. Tribes are often more vulnerable because they are in the difficult position of seeking data and research funds while struggling against simply ‘being studied’” (p. 7).

Friesen et al. (2015) further examine the inadequacies of the Belmont report with respect to indigenous communities, noting that some researchers in bioethics argue that it does not adequately consider how a research project may trivialize a community’s cultural traditions and beliefs. A situation in which biomedical researchers acquired Havasupai community DNA for a specific research purpose but then used it without consent to generate research on human origins in North America is a notable example of the potential for research to harm indigenous communities.

Where research in or about indigenous communities is concerned, Snow et al. (2016) summarize a fundamental problem with researchers as knowledge brokers wielding methodologies and research practices that disempower. Citing wa Thiong’o (1986), they note that positivist research can act as “a cultural bomb that weakens indigenous communities’ belief systems, senses of unity and languaging, and understandings of common struggle” (p. 358).

Some Approaches to Framing Research About Environmental Problems Can Obscure Possible Solutions

Where environmental health factors are the focus of research, especially in environmental justice (EJ) communities, a research process can leave community-level health risks in place when it neglects place-specific risks and instead uses frameworks that are limited to individual-level impacts and interventions. “Conventional health intervention and health promotion strategies have largely failed to mitigate the sources of environmental health risk for EJ communities because the strategies often address health at the individual behavior level rather than interacting with relevant social, cultural, and political contexts” (Davis & Ramirez-Andreotta, 2021, Introduction section, para. 3). Research that disregards the “place” in place-based research is another framing problem. Quigley (2016) echoes this in her argument that place-based identities are just as important and worth elevating in research as the individual identities protected in traditional IRB processes. “For example, many environmental research interventions will involve some study of a natural resource or spatial setting, usually within a locality of human inhabitants who are organized as a geographic community. An awareness of the meanings of place and the control of place-based conditions on the community level will be important considerations for research affecting the place conditions of individuals.” As for the kind of harm that can emerge: “when a research project/design has too narrow a design which mostly benefits the researcher’s

interest, this may produce a risk and harm to place-based conditions and the human groups/animals or ecosystems affected by a narrow design” (p. 23). Quigley here refers to research focusing on a narrow aspect of place-based environmental health or ecosystem risk that can obscure other important risk factors for disease like housing access, healthcare access, and structural racism, producing research outcomes that fail to address structural issues related to place.

Arguing that because environmental justice scholarship is “bound to a hegemonic-Western idea of modernity and Western-inspired political ideals” in which solutions to environmental injustice flow from the state, Álvarez and Coolsaet (2020) hold that this type of research risks creating new injustice when transposed to contexts in the Global South. They look at the concept of environmental equity as a response to injustices. In this view, equity is one idea in EJ scholarship that can be especially problematic in Global South contexts, wherein research that advances ideas of equitable distribution of the environmental risks of a global capitalist economy as a solution to those risks (as compared to risk distribution only to vulnerable communities) can legitimize those risks as long as they are distributed evenly.

Research Disregards the Needs of Human Communities When Advocating for Nonhuman Animal Conservation Measures

Conservation and ecological field research that advocates for threatened and endangered species can sometimes lose sight of critical entanglements between human and nonhuman animal communities and may advance conservation policy that threatens the economic stability of low-impact local communities. In a study of “village and forest” elephants in Laos, Lainé (2018) finds that research-backed conservation measures focusing solely on a Global North conception of elephant integrity overlook the resilience of cooperative elephants and human communities and the benefits that these relationships could have to conservation goals. A similar dynamic finds embodiment in Brazil, where conservation policy backed by scientific research has consistently marginalized traditional fishing communities and the social organization created by fishing activities, small in impact compared to industrial-scale fishing (Castelo Branco Araujo & de Aguiar Portela Moita, 2018).

Research Disregards the Safety and Integrity of Nonhuman Animal Communities

The question of who is worth protecting in research design is an issue in place-based environmental research. Field ecology research sometimes puts the safety of nonhuman animal communities at risk. Marsh and Kenchington (2004) identify gaps in ethical processes in field ecology and its institutional management and publishing in their case study a controversial 1996 research proposal on the impacts of fishing practices that would have exposed the Great Barrier Reef to potentially large-scale damage to the sake of data collection. Marine biologists, they

observe, were more attuned to their access to new data than to ecosystem integrity. Costello et al. (2016) point out that while laws in many nations protect animals in laboratory research from pain and stress, they fall short of protecting wild animal communities from mass death in field sampling processes, especially when the animals are culturally unpopular or are invertebrates. A few examples of other risks to nonhuman animal communities include damage to stressed ecosystems where collecting or disrupting organisms can upset species balances or introduce disease. Sampling methods like netting can harm or kill species other than the ones being studied and represent the uneven treatment of different species – some with care, some without.

This lineup of factors introduced by environmental research that undermine community autonomy is not definitive, and there is space for further research to illuminate some of these risk factors better. There is ample reason here, however, for institutions to more closely consider how they approach oversight of and support place-based environmental research and for researchers themselves to integrate reflexivity into their practices.

Strategies and Recommendations for Practice

Alongside how an environmental research project or institutional research enterprise can leave damage behind in a community, emerging from the literature is a set of recommendations and strategies for researchers and their institutions to consider to mitigate these harms. These strategies fall into four broad categories, each of which has several possible components.

As a set of recommendations, these points challenge environmental researchers and their institutions to think more expansively about who matters and who benefits in the research enterprise and to adapt research practices accordingly. The recommendations call for backing up this rethinking and adapted practices with formal structures and processes that reflect a moral research universe that takes community integrity seriously.

As a Researcher, Approach Work with Reflexivity and an Acknowledgment of Positionality and Power Relationships

While many types of conservation, ecology, and environmental research do not explicitly engage with human communities, Baker, Eichhorn, and Griffiths (2019) encourage researchers to approach their work with the understanding that the natural systems they study are entangled in human systems. They call on researchers to integrate desired outcomes for the human communities connected to the research sites into their research design. They also ask researchers to challenge assumptions of scientific neutrality and objectivity, especially concerning research in the Global South. Büscher and Fletcher (2019) envision an approach to conservation practice in which human and nonhuman animal communities each get what they need to thrive. This

vision can inform environmental and conservation research if researchers routinely consider the needs of the human communities entangled with the ecosystems, species, and environmental conditions they study. Effective research, in this view, should support the structural changes needed to protect vulnerable human communities connected to or dependent on nonhuman research subjects.

On an individual basis, researchers should grapple with their positionality, understanding how their status of nationality, gender, and race plays into the research process and acknowledging that they are not engaging in knowledge production as neutral observers. Snow et al. (2015) echo this in their work on indigenous research practices, identifying the importance of acknowledging and addressing power imbalances in research relationships and integrating a reflexive approach that can help correct unwarranted assumptions of neutrality. One example of this is incorporating positionality statements in publications and recognizing local informants' contributions. While not found explicitly in the literature reviewed, extrapolating the need for recognition of institutional positionality and power seems logical, particularly for metropolitan and urban universities, which often have strong anchor missions that have resulted in a high volume of interactions with their local communities.

Contending with differential power relationships between researchers and community members, however, is more than simply declaring a power-neutral participatory process, which Kwan and Walsh (2018) observe will not reduce or eliminate them. Instead, facing power gaps head-on and articulating efforts to address them can ground a more democratic research engagement. Actions like integrating supplemental training for community participants can help narrow, if not eliminate, power differentials that flow from positionality.

A researcher's recognition of their positionality is also important for setting community expectations and creating accountability for researchers. The relationship between the community and researcher is influenced by the past experiences of each and by their interactions at the launch, implementation, and conclusion of a research endeavor. Understanding that many communities have been the subject of repeated research activities for a variety of factors (e.g., location, access, unique attributes, extractive power imbalances, etc.), research fatigue impacts both the community and the quality of the research results, necessitating "the researchers' explicit disclosure about research outcomes, potential benefits (or lack thereof) for the participants" (LaRocca et al., 2019, p. 11). The researcher may take on a number of roles with community partners throughout the research process (i.e., expert, student, employer, observer, friend), but "no amount of methodological training, time in the field, or careful attention to ethnographic practice could change the fact that ... we are at once an insider and an outsider. In this way, a power dynamic cannot be escaped within these relationships, one that is directly tied to our positionalities as white Western researchers" (LaRocca et al., 2019, p. 14).

As a Researcher, Adopt Practices that Elevate the Safety, Integrity, and Agency of Communities Connected Directly or Indirectly to the Research

Communities can benefit from environmental research in multiple ways, including direct compensation or employment, the generation of actionable knowledge through cogeneration or as recipients, and as participants in the research itself. How each of these benefits accrues to the community and to what extent, and how harms to the safety, integrity, and agency of a community can be mitigated depends on the practices that researchers employ.

To bound and increase the applicability of their findings, environmental researchers often view communities as distinct collectives defined by ecological parameters like a watershed or an ecosystem type. They may also use political, social, and economic characteristics like census tracts, municipalities, rural versus urban, or relationship to the poverty line as research boundaries. While individual identities are comprised of a range of characteristics, there are often those defined as “local elites or interest groups” and more “marginalized groups” within any given community. Long, Ballard, Fisher, and Belsky (2015) caution that although working with elites may increase the capacity to conduct research and translate it into action, it also risks generating results that align only with the interests of those in power. By the same token, research aimed at addressing the needs of marginalized community members may impose risks to those members due to their participation. Recognizing these differences in community identities and “paying attention to power dynamics and potential consequences is particularly important in communities that may have experienced historical trauma, oppression, or discrimination by outside groups” (p. 260). To combat the dangers of essentialist approaches enshrining damaging narratives, Vohland, Weißpflug, and Pettibone (2019) suggest adopting an anti-essentialist approach to collective identity, such that identities represented in research are contingent, contextually situated, and are always in construction.

Where research design is concerned, there is a set of questions that researchers may ask themselves to empower local experts and informants and illuminate how the research findings may support community autonomy: “How many local scientists are involved in collaboration or co-creation? Are the local scientists also authors on the published work? Who has access to and interprets the resulting datasets? Who applies knowledges?” (Baker et al., 2019, p. 289). S. Wilson, O. Wilson, Heaney, and Cooper (2007) demonstrate just such a reversal of the usual community-researcher roles when controlling a research process, providing insights for research design. In this instance, the research utilized the Environmental Protection Agency’s Collaborative Problem Solving (CPS) agreement. CPSs enabled community-based organizations (CBOs) to act as the principal investigator (PI), project manager, and recipient of project funding, giving them control over scope, objectives, and outcomes. The CPS also enabled the CBO to develop a memorandum of an agreement specific to the roles and responsibilities of its

collaborative partners, including universities. When research partners created deliverables, they followed guidelines set by the CBO and directly informed the community's needs.

In most instances, however, the roles of the researcher and the community will be dictated by a more traditional model whereby community benefit comes in the form of useful and actionable knowledge, which should be developed through transparent and inclusive practices that enhance the long-term sustainability of the research. Where budget and time constraints resulting from funding timelines and graduate degree requirements mean that research results may fall short of generating useful tools for community partners, Long, Ballard, Fisher, and Belsky (2015) recommend clear communication that a resolution to a problem might not emerge from the research.

In those instances where the community or individual community members played an integral role in the research, whether as citizen scientists, research assistants, or community liaisons, providing them a larger, integrated role in the dissemination of the research can benefit both those individuals and the community. The citizen science community regularly convenes at conferences and forums, where community rewards and benefits are issues of discussion but the citizen scientists themselves are often absent. "Meaningful inclusion of citizens' goals and interests at such events and discourses requires thoughtful, creative work from the scientific community to synthesize citizens' perspectives from the project level, to conduct research that asks citizens their motivations and goals for participation, or even to develop new roles such as citizen scientist advocates to speak for this essential – but often silent – group" (Vohland et al. 2019, A Compass for the Citizen Science Community to Navigate Around Neoliberal Cliffs section, par. 1). Where community members have served as research assistants or liaisons, their inclusion in large disciplinary conferences "could be potentially valuable networking opportunities for future employment or further study on the part of research assistants ... and help address the imbalance in representation at important venues of knowledge production and bring more sustainable returns for essential co-producers of knowledge (LaRocco et al., 2019, p. 60).

In addition to creating more inclusive roles for community members in the creation and professional dissemination of the work, researchers should also consider alternative modes of dissemination that directly support community autonomy. Publishing in academic journals benefits the researcher and is a useful means of preserving information. Still, Long, Fisher, Ballard, and Belsky (2015) found examples of community benefits being better served through "creative modes of sharing results, by publishing articles in local newsletters and newspapers, presenting their findings at informal local gatherings or community meetings and producing plays" (p. 258).

While co-created design, co-authorship, and inclusion of local expertise elevate community voices, it is sometimes the case that community and academic rewards are misaligned, and monetary compensation is appropriate. But determining who gets compensated and how much can be challenging to decide on by researchers who come from outside a community. Long et al. (2015) found that “discussions with community partners could help answer difficult questions about who should be compensated (including whether it should be individuals and/or institutions), how (in cash or kind), how much, and the potential consequences of different options” (p. 259).

Finally, some kinds of research data collection from local informants, for example, that focuses on endangered species subject to poaching can potentially expose vulnerable people to law enforcement. St. John et al. (2016) layout recommendations for research practices that ensure the safety and anonymity of research informants to avoid their subsequent exposure to law enforcement as a result of research findings.

As an Institution, Cultivate a Research Culture that Accommodates and Supports Careful Community-Facing Research

A careful approach to community-facing and place-based research requires institutions to think beyond traditional review board protocols to reexamine their research culture. Aspects of professional development, community support, and involvement, an approach to funding that better aligns with the timeframes of community-facing research, and even a wholesale rethinking of research ethics are options here.

Addressing the required structural changes, Cvitanovic et al. (2019) call for a reimagining of professional development with institutions offering training and support for researchers in topics like active listening, mediation, brokering, and facilitation. On the administrative side, institutional contracting practices integrate a commitment to adequate legal and financial support to community participants. Institutions can work with researchers to the extent possible so that return trips to the community for information sharing can occur following the conclusion of a research project (LaRocco et al., 2019). Moving forward, “[a]s practitioners in both universities and nonprofits work toward building institutional capacity and securing long-term funding, individuals should examine the challenges to the PAR enterprise that arise with the probability that the researcher may more quickly leave the community” than is ideal for successful outcomes for the community (Long et al., 2015, p. 260).

Davis and Ramirez-Andreotta (2021) suggest a set of research practices that facilitate structural change, including: “community members holding formal leadership roles; project design that includes decision-makers and policy goals; and partnerships designed to be sustained multiple

years through multiple funding mechanisms. In addition, the assumption of community benefit via participation is critically examined” (Participatory Research Design for Structural Change section, par. 3). Harding et al. (2012) cite the need for robust material and data sharing agreements and offer a model for setting up research components that support transparency in project scope, methods and data collection, as well measures for data access and security.

Beyond structural reforms, others advocate for an entirely new conception of environmental research ethics. Corder et al. (2012) state that while formal guidelines like the Belmont Report are a strong foundation for protecting humans affected by the research, “...formalized ethical protocols...are unable to fully take into account the dynamic relationships between multiple parties or the constant uncertainty faced by researchers as they navigate new ethical terrain or face questions unaddressed by existing standards” (p. 163). Therefore, a “post-Belmont’ conception of ethics” can hold researchers accountable for harm prevention methodologies and benefit at both the individual level (as mandated by Belmont) and the community level.

Gilbert (2006) argues further for a new ethical foundation in which we add dignity to the Belmont Report values because respect for autonomy alone does not support the right to live and develop in a safe environment. Per Gilbert, communities are entitled to fully understand the implications of a research project and access any tools emerging from research that support their autonomy, enabled by a conception of justice that considers what is just for a whole community.

As an Institution, Examine and Adjust Formal Research Oversight and Approval Processes with a Broader Lens for Community Concerns

In a review of IRB protocols across North America, Flicker et al. (2007) found that CBPR often falls short of being a harm-reducing methodology and that traditional IRBs are ill-equipped to evaluate CBPR protocols for community-level risk. Possible adjustments to traditional IRB practices include CBPR training for IRB members; an IRB mandate that CBPR projects must consist of memoranda of understanding that “clearly outline the goals of the project, principles of partnership, decision-making processes, roles and responsibilities of partners, and guidelines for how the partnership will handle and disseminate data” (p. 487); and requirements for researchers to document how affected communities will be consulted in decisions about research design. Friesen et al. (2015) suggest that the “respect for persons” condition of IRB be expanded to include respect for persons and culture or respect for persons and communities.

Cooper et al. (2019) do not support using traditional IRBs in projects with citizen science components, as this can obstruct democratic data sharing and innovation. They recommend an institutional oversight process that is flexible enough to handle a variety of participatory research

scenarios while encouraging “dialogue among institutions about developing well-understood best practices” (p 6).

Considering the impacts of research focused on nonhuman communities, March and Kensington (2004) recognize that most experimental marine biologists and ecologists operate without the oversight that protects lab animals. In support of ethical field research on animals and ecosystems, they ask institutional animal ethics committees to integrate more expansive environmental ethics into their purview. Costello et al. (2016) echo this call for more inclusive environmental ethics for IRB committees that consider impacts on whole systems and animal communities. They additionally ask that researchers reflect on their research by asking themselves: Is the research necessary? Do the ends justify the means? Will animal or plant communities be harmed? Can less harmful methods be considered? And what is the duration and recovery period for any unavoidable harm?

Conclusion

Place-based environmental research may undermine the autonomy of communities affected by the research by wasting community members’ time without generating direct benefit; trivializing community narratives about the risks they experience; enshrining narratives that reproduce unjust power arrangements; exposing informants to physical and financial risks; introducing a unique set of risks to indigenous communities; obscuring solutions as a result of framing; disregarding the needs of human communities when advocating for conservation measures; and disregarding the integrity of nonhuman animal communities. A set of mitigating strategies is available to both researchers in these fields and their institutions: researchers should approach their work with reflexivity and an acknowledgment of their positionality and power relationships; researchers should adopt practices that elevate the safety, integrity, and agency of communities connected directly or indirectly to their research; institutions should cultivate a research culture that accommodates and supports careful community-facing research; and institutions should examine and adjust their formal research oversight processes with a lens for community concerns.

As researchers and institutions, bringing default reflexivity to research is key. It also suggests culture building to enable researchers to ask questions about intended research: does this research need to be done? By my team or by me? If it needs to be done, how does my positionality affect the research process and outcomes? How can my research results elevate the needs and interests of affected human and nonhuman animal communities without causing harm to either? Institutional research offices have a corollary set of questions to ask themselves: how does our research enterprise enable outcomes consistent with values of justice? How do we support researchers engaged in the slow work of careful community engagement? What is the work we must do in our formal process and oversight to protect and empower communities who

may be affected by research originating in our institution? What conversations should we have with funders about their expectations? The self-study processes that emerge from this inquiry can create a foundation for a more democratic approach to environmental research.

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