



Article

Aligning Community-Engaged Research Methods with Diverse Community Organizing Approaches

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Abstract: Community-Engaged Research (CER) often involves partnerships between academic or professional researchers and community organizers. Critical CER and organizing each aim to mobilize people and resources to produce actionable knowledge in order to build grassroots leadership and power that promote equity and justice for marginalized communities. This article argues that critical CER collaborations can benefit by carefully matching the choice of research methods with community partners' organizing strategies to ensure that research aligns with and supports organizing goals. We aim to add to the CER literature a more specific rationale for why professional researchers should share control over the choice of research methods with community organizers, and more detailed guidance for how CER teams can select methods that best advance organizers' goals. After summarizing the many ways in which collaborative research can support community organizing efforts, we argue that different CER methods align best with widely-used organizing approaches (including Alinskyite, Freirean, feminist, community building and resilience-based, and transformative approaches). We illustrate the discussion with examples of research conducted by and with organizations rooted in the environmental justice (EJ) movement, which prioritizes community organizing as a strategy and draws from multiple organizing traditions, including a case study of research techniques used by the Environmental Health Coalition, one of the oldest EJ groups in the U.S.

Keywords: community organizing; community-engaged research; methods; environmental justice



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1. Introduction

In addition to the vast scholarship *about* community organizing and social movements, academic and other professional researchers make many kinds of applied contributions to the theory and practice of organizing.¹ Some researchers co-develop and disseminate organizing frameworks, tools, and practices, often on behalf of funders and based on interviews with activists (e.g., [Movement Generation Justice and Ecology Project n.d.](#); [USC PERE 2018](#)). Some researchers contribute to organizing as allies by engaging in public education, political lobbying, professional networking, and media communications, or by giving expert testimony in court or convening events that give organizers a public platform ([Frickel et al. 2015](#)). In addition, a growing number of researchers practice community-engaged research (CER), which involves co-designing and co-conducting studies with community organizers ([Minkler and Wakimoto 2022](#)), which is our focus in this article.

While the literature on practicing CER has well-developed principles of collaboration among community organizations and outside researchers (e.g., [Chevalier and Buckles 2019](#); [Cooper et al. 2021](#); [Israel et al. 2013](#); [Minkler and Wakimoto 2022](#); [Wallerstein et al. 2017](#)), which include ensuring that community partners help select research methods, the literature has not paid much attention to the importance of CER partners *choosing research methods that align with different community organizing strategies*. We aim to strengthen CER that involves organizers by contributing to normative theory about why it is important to consider this

alignment, and about which research methods fit especially well with the goals of diverse organizing strategies.² This is especially important for the kind of *critical* CER endorsed by the editors of this special issue, which aims to promote structural change and equity not only in how CER analyzes issues, but in how it is conducted at every stage of a research collaboration (Gordon da Cruz 2017; McKay and Lopez 2022). Both organizing strategies and CER methods mobilize people and resources to produce actionable knowledge in ways that structure power relations among participants and prioritize different kinds of community benefits. Thus, we argue that a critical CER should align with justice-oriented organizing strategies by employing research methods that share resources with local partners, respect community-based knowledge, build community capacities to produce and disseminate that knowledge, and transform traditional hierarchies between credentialed researchers and community members. We show how critical CER can do this most fully by considering organizers' distinct approaches to building community power and helping to advance them by adopting complementary research methods.

We illustrate the discussion with examples from environmental justice (EJ) organizations based in the U.S., and a case study of how one of the oldest such organizations—the Environmental Health Coalition (EHC)—has conducted its own research for organizing (with and without professional researchers). While no movement can represent all others, the EJ movement is a useful touchstone because it embraces community organizing as a central strategy, it employs a wide variety of organizing approaches, and it frequently conducts CER with researchers in a variety of fields (Davies and Mah 2020; Raphael and Matsuoka 2024). It is also a complex movement that engages in multi-issue organizing (for environmental, economic, cultural, health, and other kinds of justice), organizes people of diverse and intersectional identities, and coordinates action across many levels (linking local organizations with regional, national, and transnational networks and coalitions) (Cole and Foster 2001; Holifield et al. 2018; Schlosberg 1999).

We begin by arguing that critical CER aligns better with grassroots organizing for long-term community power building than with top-down organizing aimed at mobilizing individuals to achieve short-term or narrow goals. Next, we describe grassroots organizers' many purposes for engaging in multiple forms of applied research, as illustrated by EHC's research. We do so because some of these kinds of research may not be fully appreciated by academic scholars, and all are opportunities for collaboration. We proceed to offer a critical summary of the most commonly used organizing approaches in the U.S., showing how certain CER methods are especially relevant to each approach, based on their particular goals and ways of engaging community members. These approaches include Alinskyite, Freirean, feminist, community building and resilience-based, and transformative approaches to organizing. In the final section, we return to EHC as an example of how organizers often combine different organizing approaches over time, which should influence research partners' choice of research methods. We conclude with some implications for future theorizing and research about evaluating the fit between organizing strategies and research methods.

2. Critical CER and Grassroots Community Organizing

CER has been applied across the social and natural sciences, arts and humanities, and professional and applied fields through participatory action research (Chevalier and Buckles 2019), community-based participatory research (Wallerstein et al. 2017), citizen or community science (Cooper et al. 2021), Indigenous and decolonizing research (Smith 2021), community lawyering (Cole 1992), and other approaches to collaborative research, many of them multidisciplinary or transdisciplinary. In all CER, "participation on the part of those whose lives or work is the subject of the study fundamentally affects all aspects of the research" (ICPHR 2013, p. 5)—from setting the research agenda, to choosing research methods, to gathering data, to disseminating and acting on results.

Critical CER is also defined by its beliefs that knowledge is co-produced by researchers and communities in an inherently social process, and that these partnerships must address

power imbalances in traditional knowledge production, respect local cultures and assets, be of practical benefit to communities, and inform action that liberates communities from structural and systemic inequities (Gordon da Cruz 2017; Israel et al. 2013; Wallerstein et al. 2017). The explicit goals of sharing power to create knowledge with nondominant communities, and of shifting power to these communities to influence laws, policies, and institutional and cultural practices, distinguishes critical CER from community-based research that remains largely conducted *for* rather than *with* communities, or that aims to improve local services and development without addressing issues of justice by strengthening communities' ability to influence how decisions that affect them are made and who makes them. Analyses of power in critical CER are often informed by critical race theory, feminism, queer theory, Marxism, intersectionality, decolonial theory, and additional theories about the causes and consequences of structural and systemic oppression (Gordon da Cruz 2017; Fine and Torre 2019; Minkler and Wakimoto 2022).

Critical CER fits well with community organizing, defined as “a process by which communities identify their assets and concerns, prioritize and select issues, and intentionally build power and develop and implement action strategies for change” (Minkler et al. 2019, 10S). Community organizing works over the long term to build capacity and leadership within historically oppressed communities to shape their own collective futures. As such, community organizing differs from other social change strategies, including advocacy (conducted by outside experts to change policies on behalf of a community), social services (provided by outside agencies to meet a community's basic needs), and development (conducted with outside experts and agencies to build a community's assets but not necessarily its power to shape its own economic or political future) (Pyles 2021).

Furthermore, grassroots community organizing stands in contrast to top-down organizing—the growing appropriation of organizing methods by outside organizations to mobilize individuals to win campaigns without building their collective power to make change (Speer and Han 2018). In top-down organizing, the main agents of change are donors and political professionals, who activate community members to donate, sign petitions, and turn out for demonstrations, without meaningfully involving people who are most affected by an issue in choosing their own goals or strategies. These experts draw on new sources of data and analytics to target subgroups most likely to act, using messaging tailored to their attitudes, behaviors, and other characteristics. One example is the failed attempt to pass carbon cap-and-trade legislation in 2010 by the U.S. Climate Action Partnership, a coalition of CEOs and large environmental groups, which only aimed to mobilize the public to support the Partnership's predetermined policies (Skocpol 2013).

Critical CER is also less well-attuned to “small organizing” involving short-term campaigns on narrow issues than to “big organizing” that builds toward structural change over the long run (Bond and Exley 2016). Small organizing lends itself to direction by a core group of professional advocates or well-resourced organizations seeking to generate short-term grassroots energy to support a predetermined policy change. It also serves many funders' highly specific priorities, preference for supporting established organizations, and elite-led theories of social change (Blanusa et al. 2018). Big organizing, in contrast, tries to build long-term grassroots movements directed by community leaders and active memberships. These movements tend to address an array of interconnected and entrenched injustices through a series of campaigns aimed at winning multiple changes, deeper social transformation, and stronger democratic participation over time. For example, large environmental organizations and global aid groups tend to take top-down, narrow approaches to change when addressing environmental justice issues, launching campaigns to ban a single chemical, protect one species, or boost the economic fortunes of a particular demographic. In contrast, local EJ organizations and their networks and movements tend to engage in grassroots and multi-issue organizing to shift power and resources over the long term (Cole and Foster 2001; SouthWest Organizing Project 1990). Successful EJ campaigns and organizations are synergistic, with campaigns winning the kinds of concrete improvements in people's lives that mobilize communities, and movements providing the

kinds of linkages between people and among issues that sustain transformational change over the long run (Blanusa et al. 2018).

In sum, critical CER researchers can ask how both the research process and its outcomes can build grassroots power over the long run and help to connect small organizing to big organizing, rather than mobilizing passive constituencies to back piecemeal reforms designed by outside experts.

3. Roles for CER in Community Organizing

CER collaborations among academic researchers and community organizers can offer unique advantages over traditional research conducted exclusively by outside professionals. CER can enhance the research's *rigor* by offering access to local and experiential knowledge, its *relevance* to policy and practice, and its *reach* to new audiences and users (Balazs and Morello-Frosch 2013). In particular, organizers can teach researchers how to deploy their findings more strategically and effectively for policy and practical change (Minkler et al. 2019). Collaborating with communities can also sharpen all research partners' *reflexivity*, as they question their own assumptions and carefully co-define their intended purposes, methods, and beneficiaries (Raphael and Matsuoka 2024).

For organizers, research is rarely an end in itself, but is primarily a means to identify community issues and assets, prioritize and frame issues, inform strategies to build power and engage in effective actions, and other practical goals (Minkler et al. 2019). Organizers may collaborate with professional researchers to gain access to research expertise and funding; build their organizations' capacities; gather authoritative evidence to support campaigns; influence policies, practices, and funding; and map movements and organizing networks (Giancattarino 2018; Matsuoka 2017; Perez et al. 2015). However, while organizers typically must prioritize practical goals in research, strong movements value honest research, even if it does not confirm their assumptions but suggests more effective approaches (Pastor et al. 2011). Furthermore, movement organizations are quite capable of producing research that develops theory from their experiences and observations (Pastor et al. 2009).

Community organizers can prefer different relationships with researchers. Because organizers' goal of shifting power to communities often includes developing their power to do research, organizations that possess greater resources and expertise often prefer to direct their own research projects, employing professional researchers as employees, contractors, consultants, or advisors. Examples include national and transnational organizations, networks and coalitions of smaller groups, labor unions, community economic development initiatives, and foundations. In addition, organizations with low trust in traditional researchers—including some tribal governments and other organizations led by Black, Indigenous, and People of Color (BIPOC)—prefer to reserve control over research in their communities. Many of these groups view much academic and government research as exploiting communities and reflecting the views of dominant political-economic interests (Cable et al. 2005; DataCenter 2015). As a result, some of these organizations have turned to independent sources of research and training that were founded to support social movements, such as the Highlander Research and Education Center (www.highlandercenter.org (accessed on 7 April 2023)), Race Forward (www.raceforward.org (accessed on 7 April 2023)), and the former DataCenter (2015). Nonetheless, many academic and independent researchers have been able to build trust with such groups over time and collaborate effectively with them.

Table 1 summarizes ways in which grassroots organizations conduct applied research to support all of the major elements of organizing, including building membership, developing leadership, building organizational capacities, and designing campaigns (adapted from DataCenter 2015).

Table 1. Research for organizing.

Elements of Organizing	Research Activities	Research Products
Membership Building Recruiting, educating, healing, and retaining community members to help envision and implement the organization's work	Background research on effective methods of engaging members Canvassing, surveys, house meetings, interviews, and focus groups to identify community issues and needs, educate and recruit participants, develop goals Community events and social media outreach to share original research, amplify community voices, educate and attract participants, dispel misinformation, celebrate local culture, and build solidarity among members and allies	Internal reports and tools (recruiting plans, canvassing scripts, etc.) Reports and maps of community assets, needs, priorities Presentations, stories, participatory media
Leadership Building Developing members' political education, analysis, and practical skills	Background research on effective programs of political education (e.g., critical consciousness, intersectional analysis); skills acquisition (organizing, communication, etc.); and personal healing (physical, psychological, and/or spiritual) Training members to participate in community-engaged research	Education and training curricula (lesson plans, exercises, simulations and games, videos, and readings, etc.)
Organization Building Developing capacities to sustain leadership and campaigns, attract new members and allies, and respond to changing conditions	Participatory evaluations Strategic planning Research on funding models and strategies Research and training on campaign development and tools Research on formation and governance of organizations and alliances	Internal evaluation and planning documents Evaluations for funders, members Curricula and case studies on campaigning and governance
Campaigns Engaging in sustained efforts to change policies, institutions, individual attitudes and behaviors, or community capacities	Data gathering to document and define problems, causes, and potential solutions (laws, policies, regulations, practices, litigation, etc.) Researching targets and allies Research and training on strategies, tactics, tools Campaign communication research Participatory evaluations (of campaign's progress toward goals, membership and power built, lessons learned)	White papers, investigative reports, case studies Target and power analyses Fact sheets and toolkits for organizing and research Development and testing of frames, messages, and tools (apps, databases, etc.) Evaluation research reports and articles

Examples from the Environmental Health Coalition (EHC)

EHC illustrates some of the ways research, including CER, permeates each element of organizing and its potential impacts. Founded in San Diego in 1980, EHC is one of the oldest grassroots environmental justice organizations in the U.S. Initially, the group focused much of its work in the Barrio Logan community in San Diego and Old Town in National City (OTNC), two neighborhoods in which development was shaped by long-term systemic environmental racism that located polluting industries there, including auto body and chrome plating shops, chemical suppliers, and diesel truck traffic that served the Port of San Diego's growing international trade. As a result, residents suffer asthma-related hospitalization rates at two to three times higher than the rest of the county (Takvorian et al. 2008).

EHC's organizing model includes the creation and maintenance of Community Action Teams (CAT), consisting of community leaders, *promotoras de salud* (lay health promoters), and others who are dedicated to making change. In 1994, as part of its Toxic Free Neighborhoods Campaign, the group researched and designed an innovative curriculum for training *promotoras* in the mainly Latinx neighborhoods in which EHC worked (Parachini and Mott 1997). The group based its training program on informal, women-led networks for sharing information and assistance typical in many Latinx communities, and on a peer education model developed by the Por La Vida project at San Diego State University to support per-

sonal and family health. The intensive program taught participants about environmental health issues, how to protect oneself and one's family, and how to organize the community to address these threats through policy and political change. EHC continuously improved the curriculum by asking participants to evaluate it throughout the process and by using pre- and post-training surveys to assess participants' learning. In a few years, the group had trained over 200 *promotoras* to work on multiple campaigns. Over a dozen local and national foundations supported EHC's influential curriculum—entitled *Salud Ambiental Lideres Tomando Accion (SALTA)*—which other EJ organizations around the country began to use. Thus, the program built EHC's *membership, leadership, and organizational strength*.

The program also supported multiple *campaigns*, including one that EHC launched in 2004 to prepare residents of Old Town National City (OTNC), a low-income and mostly Latinx residential area, to address land use planning in their community. In the 1950s, an all-white city council had voted to rezone OTNC to allow polluting industries to move into the neighborhood (Minkler et al. 2010). Now, a new city council has decided to revise the land use plan for the area. EHC trained 18 *promotoras* to act as co-researchers, community liaisons, and policy advocates (Environmental Health Coalition 2005).

EHC's campaign research traced respiratory and other health problems to poor air quality due to chemical emissions from many auto body and paint shops, and diesel particulate emissions from a truck driving school (Minkler et al. 2010). The group's analysis of national and regional public health data showed that neighborhood children suffered asthma at double the statewide rate of childhood asthma and that they lacked health insurance at triple the rate of the county's children as a whole. EHC staff used geographic information systems (GIS) mapping of state and county air emissions data for the area, showing disproportionate pollution density in OTNC compared to three adjacent areas, mostly coming from the auto body shops. The *promotoras* conducted their own air sampling to show that particulate matter concentrations were six times higher around the truck driving school, including directly across the street from an elementary school, than at a control site (City Hall). Health researchers at the University of Southern California shared their research on 12 Southern California communities with EHC, which demonstrated associations between traffic-related pollution and asthma attacks, and harm to children's lung development that affected lung functioning into adulthood (Gauderman et al. 2004; Jerrett et al. 2008).

A community survey administered and analyzed by the *promotoras* identified residents' policy priorities for the area. Already feeling the effects of gentrification, residents realized that if air quality were improved, the threat of displacement would also worsen, so their top three priorities were to build new affordable housing for residents, relocate the auto body shops outside the residential area, and rezone the community for residential and compatible uses (Environmental Health Coalition 2005). EHC convened residents to weigh a variety of policy options, then organized the community to influence the new Specific Plan for the area, creating power maps of their targets (the city councilors), allies, and opponents. The group enlisted the University of San Diego's Environmental Law Clinic to articulate the legal basis for an ordinance to amortize auto body shops and other pollution sources and help advocate for it (Minkler et al. 2010).

EHC mobilized support for policy changes using several common techniques (Cacari-Stone et al. 2017). After publishing their research in a well-documented report, they advocated to policy makers and the community through local news media. Their Community Action Team drummed up support through door knocking, house meetings, and flyers, recruiting residents to attend and testify at public hearings, and to brief officials. While EHC staff and their academic partners communicated with local leaders, the *promotoras* stepped forward as the central providers of testimony in hearings and constituent meetings. A comprehensive evaluation of the campaign conducted by EHC and researchers from the University of California Berkeley School of Public Health found that the news media and city officials cited EHC's research throughout the process, treating it as credible and rigorous evidence of OTNC's needs and priorities, and describing it as having a major

influence on policy formulation (Minkler et al. 2010). The city council unanimously passed an amortization ordinance phasing out polluting businesses and the EHC report's recommendations were reflected in the land use maps in the adopted planning documents as OTNC became the first city in California to include environmental justice in its general plan.

Successful campaigns such as EHC's extend and strengthen an organization's *membership* and *ally networks*, grow new *leadership*, and help the organization to develop new *capacities*. Evaluation research found that the *promotoras'* frequent interactions with coalition partners (such as a local elementary school and Catholic church) helped to strengthen EHC's ties to other community groups and mobilize the neighborhood's families (Minkler et al. 2010). EHC ended up hiring five of the *promotoras* as community organizers and one resident who worked on the campaign went on to win election to the city council. EHC also bolstered its own long-term capabilities, including deepening its experience at partnering with academic researchers from multiple institutions, its knowledge of children's health issues, and its use of air monitoring and survey research techniques, which strengthened the group's ability to apply for funding. Thanks in no small part to its strong research, the campaign also built EHC's credibility and power with local government. EHC subsequently played a major role in persuading the city and the U.S. Environmental Protection Agency to invest in a feasibility study for creating an industrial park where relocated industries could move to, and restoring a brownfield area for affordable housing, marshland, and parks with major contributions from California's Greenhouse Gas Reduction Fund (Minkler et al. 2010).

4. Aligning Research Methods with Organizing Approaches

Researchers who want to collaborate with organizers also need to be familiar with the particular approaches of the major organizing traditions because they can suggest different research methods. We present these organizing approaches as ideal types that are useful to distinguish for analytic purposes but blended in practice by organizers, who often draw on more than one approach (Pyles 2021; Staples 2016). Table 2 presents the elements of each tradition, along with examples of CER methods that align especially well with each. However, this is not an exhaustive list of CER methods, nor does each method presented here have an exclusive affinity with any one organizing approach.

Table 2. Community organizing approaches and CER methods.

Approach	Activities Prioritized	Developmental Focus	Role of Organizer	Especially Relevant CER Methods
Alinskyite	Mass membership recruitment, campaigns	Organizational power, solidarity	Organizer as agitator, guide	Target and power analysis, crowdsourced community science
Freirean	Liberation education, critical consciousness (especially of capitalism, colonialism)	Individual and group liberation	Organizer as facilitator, partner in teaching and learning	Role-plays, simulations, games, community mapping and counter-mapping, photovoice, and other participatory media
Feminist	Integration of personal and political; intersectional analysis of sexism, racism, classism; building alternative organizations	Individual, group, and community liberation and nurturance	Group as organizer, rotating leadership, community-defined levels of contact	Testimony (interviews, oral histories, biomonitoring), popular epidemiology, ground-truthing, healthcare <i>promotoras</i> , guides to self-care and community care
Community Building and Resilience-based	Developing community capacities and ties	Networks and linkages, social capital, collective problem solving, communities as systems	Organizer as builder of communal ties and consensus across diverse organizations and people	Asset mapping, focus groups, collective decision making, conflict resolution, creative placemaking
Transformative	Integration of holding actions (campaigns), creating alternative institutions, and personal transformation	Remaking dominant institutions, founding alternative institutions, healing individual and collective trauma	Organizer as inclusive and intersectional relationship builder; horizontal, shared, and rotating leadership	Case studies of, and participatory planning for, grassroots campaigns, governance of alliances, non-market economic institutions, and healing justice programs

4.1. Alinskyite

Saul Alinsky (1971) provided the basic terminology and techniques employed in most efforts to build contemporary community organizations and design campaigns. His power-based organizing method emphasizes building mass membership organizations in disenfranchised communities by winning short-term campaigns that build members' collective identification and increase their power. The organizer's job is to agitate the community's dissatisfaction with the status quo, devise confrontational but non-violent strategies, develop local leaders, and mobilize residents to execute campaigns.

Alinsky's thinking especially influenced several national networks of community organizations in the U.S. that sometimes engage in EJ work, including the Industrial Areas Foundation (founded by Alinsky himself), PICO (formerly the Pacific Institute for Community Organizing), the Direct Action Training and Research Center, and the Gamaliel Foundation. This approach also informed the United Farm Workers' organizing strategy, which recruits individual members through house meetings and mobilizes them to take direct actions (strikes, boycotts, and marches) to win campaigns for increased wages and protections against pesticide exposures.

Alinskyite campaigns focus on persuading individual decision makers, typically in government and industry, which requires researching their targets' personal and organizational values and ties. These target analyses may be as extensive as profiling a transnational corporation and its industry to understand their sources of power and potential leverage points, as well the target's incentives and disincentives to cooperate (Schiffer 2007). In addition, power mapping identifies who can influence a target and how, including their strength and stance on the issue at hand; relevant networks of EJ researchers can be included in these maps (DataCenter 2015; UCDEHSCC and UMLEEDCC 2018).

Some Alinskyite groups have collaborated in other kinds of CER, such as an environmental health study in Mexican-American *colonias* outside El Paso, Texas that monitored air pollution from a local steel plant, which provided evidence used in a campaign to reduce emissions (Staudt et al. 2013). Crowdsourced community science aligns well with Alinsky's mass membership strategy because it attracts large numbers of participants to contribute their environmental and health data repeatedly, amassing large datasets that help establish causes of environmental health disparities and harms, and force regulators and polluters to recognize residents' local knowledge of health impacts, rather than dismissing it as anecdotal evidence. Large samples may also speak to power in another way: officials who know that many of their constituents have participated actively in community science studies may be more likely to pay attention to the results.

Despite its enormous influence, the Alinskyite approach has drawn criticisms (Martinson and Su 2022). These methods can fail to build sustained local leadership, as overworked organizers burn out or move on to other campaigns elsewhere, and members leave the organization when campaigns end. A focus on local targets alone is not well-suited to addressing the systemic impacts of transnational corporations and building necessary alliances with other, similarly affected communities. Given his emphasis on building multi-issue organizations that span social divides, Alinsky did not encourage a broader analysis of the root causes of oppression that are central to EJ, such as racism, sexism, and colonialism. His focus on recruiting large numbers of participants to build power by winning short-term campaigns may be more suited to enacting piecemeal reforms than imagining larger structural change. Because he believed that effective organizing must appeal chiefly to residents' self-interest, his approach may undermine the sense of collective justice that motivates solidarity work among EJ communities and allyship by those who live outside them. Furthermore, his method has been critiqued as narrowly masculine because it does not welcome campaigns to change cultural or "private sphere" issues, provides little work/life balance for organizers, and prioritizes confrontational tactics. Many organizations that use Alinsky's approach have modified it to address these limitations.

4.2. Freirean

Paulo Freire's (1970, 1982) writings about education for liberation inspired another organizing approach. Freire's method promotes critical consciousness that sparks action ("conscientization") by convening participants in small groups to discuss the challenges they face, identify the root causes in larger patterns of socio-economic and political oppression, plan collective action, and reflect on these actions. The aim is to free both the individual participant and the community. The Freirean organizer functions as a facilitator of dialogue among participants, who are both learners and teachers capable of analyzing their own situations and proposing their own solutions, not acting as a community leader or a teacher who dispenses knowledge. Rooted in adult education in Latin America, Freire's approach puts equal emphasis on participants developing theory and practice (praxis) to liberate themselves especially from the bonds of colonialist and capitalist exploitation. Community organizers have drawn several main lessons from Freire's work, including a belief that organizing must begin with popular political education connected to issues of everyday life, that oppressed people can discover their own solutions to social problems through dialogue, and that movements need to be internally participatory and egalitarian if they want to prepare people to build a democratic and equitable society (Sen 2003).

Freire's conviction that people are capable of producing their own knowledge through a cycle of dialogue–analysis–action–reflection inspired participatory action research rooted in popular education approaches. He and his followers frequently engage participants in role-plays to develop and explore potential interventions for responding to oppression (Boal 1979, 2005). EJ groups and medical schools have collaborated to use these theatrical techniques to introduce residents to environmental toxicology and risk assessment, and to spark community dialogue about potential responses (Sullivan and Parras 2008). Likewise, some social movements and community planning processes use simulations and games to engage members of marginalized communities in envisioning goals, strategies, and campaigns (Lerner 2014). By employing popular ways of communicating and interacting, games and simulations can make campaign and research design accessible and engaging. Community mapping—used in many CER projects to identify and represent local problems, point out disparities among neighborhoods, and select issues for action—fits well with Freirean popular education (Haklay and Francis 2018). Counter-mapping can "challenge dominant ways of conceiving the landscape and the socio-political interests they represent" (Willow 2013, p. 872) by making demands to return lands to Indigenous peoples, resist gentrification, and so on. Photovoice and other participatory media methods in which community members document their surroundings and discuss their work as the basis for collaboratively planning projects and campaigns to improve their local environments fit well with Freirean popular education.

However, Freirean approaches face some limitations. Participants can spend significant time on building group trust, analyzing social conditions, and group learning. Such groups can struggle to engage large numbers, to move from self-education and social critique to action, and to amass political power through activism and electoral campaigns (Martinson and Su 2022). In regard to EJ, Freire's approach may be most productive for developing emerging leaders (Scandrett 2007). It may also be most helpful for the initial development of community responses to complex problems stemming from multiple sources that cannot be solved by focusing on a single target, such as disproportionate rates of respiratory illness in urban neighborhoods. In contrast, Alinsky's approach may be more successful for mobilizing support for campaigns to block approval of polluting facilities or enact protective legislation because there are easily-defined corporate and official decision makers to target (González et al. 2007).

4.3. Feminist

Feminist approaches have also shaped EJ organizing. This is not surprising given that women make up an estimated 90 percent of members of U.S EJ groups (Rainey and Johnson 2009), and a majority of the leadership of these organizations (Taylor 2015). Feminist

or woman-centered organizing centers power relationships, and often develops political analyses and actions for women's empowerment that are grounded in their personal experience of sexism in the "private" spheres of home, work, and culture. In the EJ movement, this has often meant organizing against environmental threats to women's health, children, homes, and neighborhoods, which is often framed as an extension of women's traditional roles as caregivers and mothers (Gaard 2018).

In contrast with the Alinskyite approach, feminist organizing tends to appeal to nurturing communal interest rather than self-interest, empowerment through building strong relationships and dialogue with other women more than amassing large numbers of supporters, and a style of leadership that is group-centered (in which there are multiple rotating leaders) rather than leader-centered (in which there are a few key spokespeople and organizers) (Stall and Stoecker 2005). Feminist organizing has excelled at building alternative organizations led by and for women, such as women's health centers and media. This organizing has also productively politicized the research agenda by demanding greater investment in research on women's environmental health, and helping to end coercive population control programs, such as efforts to sterilize low-income women of color in the U.S. and Global South (Silliman 1997).

Black feminists and allied feminists of color address how to overcome the intersectional forms of racism, classism, and cultural oppression faced by African-American, Indigenous, Chicana/Latina, Arab-American, and Asian-American women (Gutierrez and Lewis 2022). As Patricia Hill Collins writes, in Black Feminist thought, "partiality and not universality is the condition of being heard; individuals and groups forwarding knowledge claims without owning their position are deemed less credible than those who do" (Collins 1990, pp. 236–37). While many women of color EJ organizers assert their identity as mothers and caretakers, they also tend to root their ability to know and represent their communities authentically in their racial, ethnic, linguistic, and geographic positions (Peoples and DeLuca 2006). Feminists of color center leadership by Black, Brown, Indigenous, and Asian women and queer community members and often recommend greater levels of engagement with the community for insiders than for allies (Gutierrez and Lewis 2022; Rivera and Erlich 1998).

In addition to respectful consultation and capacity building, several other research methods and approaches especially lend themselves to feminist organizing. These approaches value evidence in the form of testimony, in which community members tell their truths, which are rooted in their experience, bodies, relationships, and communities (Peoples and DeLuca 2006). This evidence can be gathered through interviews and oral histories and expressed in participatory arts and media projects. In addition, by donating samples of hair, nails, urine, or blood, participants in biomonitoring studies give testimony about the toll of environmental risks on their individual bodies, including acute and chronic exposure to emissions from industrial sources and consumer products.

Collective testimony may be gathered through popular epidemiology, in which residents gather data on incidences of disease in communities and workplaces suffering high exposure to pollution, and ground-truthing, in which community members compare official maps with their own knowledge of where pollution sources are located in their community. These data correct for the failure of quantitative risk assessment to demonstrate the health effects of pollution conclusively and the failure of regulatory maps to represent threats comprehensively. In her study of citizen scientists in majority Black communities of the Louisiana Industrial Corridor (a dense cluster of petrochemical facilities known as "Cancer Alley"), Allen (1997) argues that popular epidemiology and ground-truthing can be seen as feminist practices of science. This is not simply because women gather much of the data, but because the data represent a collective testimony about environmental health that is based on residents' situated knowledge of geography and disease.

In addition, disseminating health research through accessible guides written by and for women has been important since the publication of the ground-breaking *Our Bodies, Ourselves* in 1973, which incorporated material on environmental and occupational health impacts on women in subsequent editions (Norsigian 2011). Women of color health groups

have pioneered the dissemination of gender- and cultural-specific health information and services to EJ communities, presented through the framework of reproductive justice, which encompasses the ability of women in EJ communities to secure their reproductive health, human rights, and wellbeing (Ross et al. 2016).

Similar to Freirean organizing, feminist and women of color approaches can be limited to small-scale groups and localized efforts for change if groups are committed to consensus decision making, and some groups may have difficulty moving from analysis to action (Smock 2004). As well, organizing on the bases of maternal knowledge and authority can “have the inadvertent result of reducing and simplifying complex political, economic, social, and technical environmental issues . . . while simultaneously reducing female identity to the facts of women’s reproductive capacity” (Stearney 1994, p. 155). Influenced by queer theory and organizing, more contemporary EJ organizing and research have also included attention to multiple genders, expanding the original EJ movement’s focus on gender justice (Pulido 2017). Still, given the centrality of women (and especially women of color) to the EJ movement, CER that centers them as community leaders, respects the need for separate programs and organizations led by women and women of color, and develops an understanding of how gender and race shape environmental oppression is indispensable to organizing in EJ communities.

4.4. Community Building and Resilience-Based Organizing

The community building approach has been especially influential in public health, social work, and community planning and development. While this method seeks to strengthen individuals, leaders, social groupings, and organizations, it prioritizes fostering connections and networks within and among these different entities to strengthen a community’s ability to operate as a whole (Walter and Hyde 2012). Organizers view communities as social systems made up of several subsystems, such as economic production–distribution–consumption, socialization, social control, social participation, and mutual support (Warren 1963). Community building organizers aim to increase social capital, or the value of linkages between and within social networks—including shared norms, trust, and reciprocity—which contribute to individual and communal health, prosperity, and resilience (Hawkins and Maurer 2010; Putnam 2000). Social capital may involve bonding (deepening existing relationships among those who share a similar aspect of identity), bridging (forging new relationships between those who differ in some way, such as race or age), or linking (creating ties between community members and organizations with power, for example, to obtain resources or services) (Szreter and Woolcock 2004).

Resilience-based organizing takes a more radical approach to communities meeting their own needs through cooperation, resource sharing, and democratic self-governance (Pyles 2021). Rather than looking outside the community for resources or strengthening the community’s ability to participate in the larger capitalist economy, resilience-based organizing develops alternative cooperative economic structures, such as time banks, local currencies, community land trusts, mutual aid societies, and cooperatives of workers, producers, or consumers. This kind of organizing prioritizes developing direct or horizontal democracy at the local level over strengthening the community’s representation in the larger system of representative democracy. Resilience-based organizing also tends to focus on regenerating local ecologies and cultures. Elements of many movements relevant to EJ—including Black liberation, feminist, Indigenous, anarchist, immigrant, and global justice movements—embrace resilience strategies (Movement Generation Justice and Ecology Project n.d.).

Mapping of community assets, resources, and entities is especially useful research for community building and resilience-based organizing for EJ. Asset maps, for example, often identify individual and organizational capacities controlled by people within the community (such as by local nonprofit organizations or small businesses); assets that are located in the community but controlled from outside (such as many university and medical resources); and assets that are situated and directed from outside the community, but potentially harnessed by it (such as government funding or information resources)

(McKnight et al. 2022). Organizers and residents can use these maps to strategize about building on the community's existing strengths to develop new ties that help regenerate local economies, healthcare, or political power. Case studies of collective decision making and conflict transformation can support community building and resilience for EJ (Rodríguez and Inturias 2018). Focus groups that convene residents or organizational representatives may help illuminate common aspirations. Research on promising practices in developing solidarity economies and mutual aid after climate-induced disasters can support resilience-based organizing (Illner 2021). Arts and humanities researchers can especially contribute to creative placemaking activities, which organize local youth and other residents to foster justice-oriented attachments to their communities by recovering and representing local history, painting murals, restoring Indigenous cultural sites, and so on.

While a community building approach can be useful for strengthening EJ communities' capacities to remediate pollution, promote healthcare, develop green jobs, and the like, this method has its limitations, too (Smock 2004). EJ may be best served not by strengthening ties with local polluters to mitigate their emissions, but by evicting them. Community building can be vulnerable to manipulation and co-optation by outside resource holders, such as the government agencies or foundations who fund much of this work. It can also risk domination by more affluent and educated residents within the community, who bring more resources to the process and can therefore bend plans toward their interests. For example, using a community building approach to improve environmental conditions in urban neighborhoods without protections for low-income residents can fuel gentrification and displacement (Anguelovski et al. 2018). Placemaking efforts that are driven by a logic of speculative community development can promote "place-taking" rather than supporting residents' social ties and resilience in place (Bedoya 2012). If resilience-based organizing aims to avoid these pitfalls, participants may not be able to meet all of their needs with local resources, and organizations that do not aim to influence larger electoral, judicial, political, and environmental systems remain vulnerable to external control and disruption. While mutual aid can strengthen local ties and capacities, it can also serve the neoliberal hollowing out of the state by excusing it from its responsibilities to abandoned communities (Illner 2021).

4.5. Transformative

Transformative organizing creates a blend of elements of the approaches discussed above. It encourages participants to engage in three kinds of activities: "holding actions" to counter immediate threats posed by dominant institutions (through protests and other direct actions); long-term work to create alternative structures (such as those created by resilience-based organizing at the local level, as well as new movement structures); and personal transformation (by popular education in groups, healing trauma, and mind-body work) (Macy and Johnstone 2012; Pyles 2021). Thus, transformative organizing aims to encompass Alinskyite campaigns, Freirean popular education, the fostering of supportive relationships and personal healing associated with feminist and women of color organizing, and the parallel institutions of resilience-based organizing (Mann 2011; Zimmerman et al. 2010).

This approach has especially grown out of 21st century left movements on global trade, climate justice, working class residents' rights to the city (especially to affordable housing, but also public services, immigration, and political participation), and abolition of police violence (Dixon 2014; Fisher et al. 2013; Grosse 2019). Each of these movements addresses environmental justice issues and aims to connect local organizing with national or transnational movements. Each is strongly critical of corporate power, capitalism, and neoliberalist cuts in public spending for human needs, privatization of public resources, and deregulation of industry and trade. Each also depends on building multicultural, multiracial coalitions, often across borders, as epitomized in the 2014 People's Climate March slogan: "to change everything, we need everyone."

Transformative organizing emphasizes intersectional and relational organizing. Organizers strive to recognize how multiple identities (of race, gender, class, immigration status, and more) intersect to shape participants' experience of oppression and privilege, yet also how these experiences interlock, to the extent that they stem from common sources of power and suggest common ground for movements to collaborate (Di Chiro 2021; Grosse 2019; LeQuesne 2019). Transformative organizers aim to maintain solidarity across differences by flattening organizational hierarchies and sharing and rotating leadership within and among groups. They seek to model interpersonal relationships of mutual respect and care, avoiding the transactional and strategic treatment of participants sometimes practiced by Alinskyite organizers, and the infighting and power struggles that can infect all organizers' relations with each other.

Certain kinds of research can be especially pertinent to the different movements using this approach. Transformative organizing on EJ tends to happen in networked coalitions of diverse grassroots organizations. Compared with top-down national organizations that set the terms for local chapters, networks such as the Climate Justice Alliance (climatejusticealliance.org) and The Right to the City Alliance (righttothecity.org) must share information, deliberate, and coordinate goals and strategies among a large number of equal partners accountable to diverse constituencies. These networks may be especially interested in participatory planning for large-scale change, such as just transitions to a clean energy economy for labor and communities of color. Transformational organizers also conduct and disseminate case studies of members' campaigns and personal transformation programs, local organizing techniques, policy solutions and projects that pilot non-market economic institutions, and research on effective and equitable governance of alliances of grassroots organizations (Baptista et al. 2024; Solis et al. 2024).

The transformative approach's innovative strengths also present distinctive challenges (Pyles 2021). It is difficult to balance the demands of addressing immediate needs, building long-term alternatives, and enacting personal change simultaneously. Consensus decision making and relational organizing are time-consuming. It is no easy task to organize among and across diverse organizations and constituencies that have not worked together historically on issues that have not been connected in their minds. This work poses twin dangers of papering over differences in the name of unity or refusing to engage in coalition work because others are deemed too complicit in injustice. Addressing ongoing inequities and divisions while making common cause is hard work, especially in the absence of crises that galvanize broad constituencies.

4.6. Examples from the Environmental Health Coalition

The danger of highlighting the differences between organizing approaches for analytic purposes, as we have shown here, is that it can obscure the many ways in which these approaches and research methods can come together in real-world efforts. As a corrective, it is helpful to expand on the case of EHC and how it has employed a mix of organizing strategies and relevant research methods over time.

In its Toxic Free Neighborhoods Campaign (described above), EHC applied *Alinskyite* strategies when it used target and power analysis to develop plans to influence city councilors, potential opponents, and allies during its campaign to redraft San Diego's city plan, and when it agitated for an ordinance to phase out auto body shops from the Old Town neighborhood, drafted with help from University of San Diego's Environmental Law Clinic.

EHC has also employed *Freirean* popular education techniques in its community health training program for Community Action Teams and *promotoras*, used to train all of the organization's community leaders in organizing and the broad array of environmental health issues on which EHC works (Takvorian et al. 2008). EHC's popular education approach has been adopted by many EJ organizations, including sister organizations just across the border in Tijuana, México, which EHC supported to conduct community mapping with residents on similar environmental health issues in the city's urban planning process (Prado et al. 2021). EHC's *promotora* program also draws on *feminist and women of color*

organizing, addressing intersecting issues of race, gender, and class by cultivating informal, Latina-led networks that develop guides to self-care and community care, providing health information and assistance in ways that link family and community health education with organizing to change public policy and practices.

EHC borrowed from *community building and resilience-based* approaches by organizing alliances with a broad array of local churches, schools, and other organizations in its Toxic Free Neighborhoods and brownfield redevelopment campaigns. The group expanded its community networks as it shifted from enlisting regulators to monitor and shut down polluting facilities one-by-one, which is slow and expensive, to forming a broad coalition to influence land use planning by using official data and the group's own monitoring of emissions to protect community residents by influencing changes in statewide regulations and local rezoning, using a precautionary model ([Environmental Health Coalition 2004](#)). In 2008, EHC organized residents of Barrio Logan to research and develop their own community vision, based on community surveys and support from a land use planning firm, which included detailed plans for "zoning changes, volume and affordability levels of new housing units, identification of industries for relocation, park acreage, and school requirements, among other things" ([Takvorian et al. 2008](#), p. 77). The plan was endorsed by over 1000 residents, 28 community organizations, and 16 local businesses.

EHC has also adopted *transformative* organizing techniques by extending its definition of community to engage in transnational organizing and environmental monitoring with partner organizations in México. EHC has addressed cross-border issues such as pollution created by *maquiladoras*, associated truck traffic through residential areas in Tijuana and San Diego, and illegal dumping and waste contamination ([Environmental Health Coalition n.d.](#); [Prado et al. 2021](#)). EHC was also a founding member of the California Environmental Justice Alliance, an alliance of community-based organizations that combines research, organizing, movement-building, and policy advocacy at the state level, which has helped to increase state funding for environmental justice research and inject equity into many areas of California's environmental policies and regulations.

5. Conclusions

We have argued that researchers who practice critical CER can fulfill its goals most fully by proactively and carefully understanding each community partner's distinctive approach to organizing, and collaborating with them to choose research methods that align best with the characteristic activities and goals of this organizing approach. In doing so, we aimed to contribute to the CER literature a more specific rationale for why professional researchers should share control over the choice of research methods with community organizers, and more detailed guidance for how CER teams can select methods that best advance organizers' goals. To these ends, we showed how organizing approaches and research methods both mobilize community members and resources in ways that build particular individual and organizational capacities, such as recruiting and engaging a large membership through a community science project, developing critical consciousness by practicing photovoice and community countermapping, and building a community-driven planning vision by conducting asset-mapping and surveys. While critical CER can be applied with partners who draw on multiple organizing traditions, some CER methods align better with the means and ends of different organizing approaches.

The importance of finding the best match between organizing approaches and CER methods has many implications for how professional researchers and community partners codesign studies to meet the major goals of critical CER mentioned in Section 2 of this article. Although we can only begin to sketch these implications here, CER teams can use these principles as a rubric to evaluate how well their choice of methods meshes with community organizing goals.

First, to ensure that CER is of *practical benefit to communities*, researchers have a duty to consider and consult with community partners about which methods fit well with particular approaches to organizing, so the research process contributes fully to organizers' goals.

Researchers bear a special responsibility because they typically bring to CER collaborations more knowledge about the broad array of research methods, including emerging methods. For example, designing a study that requires complex analyses of big data drawn from government and commercial databases erects barriers of cost and expertise to community participation, but such a study could lower these barriers by incorporating big data gathered by affordable environmental sensors (such as air or water monitoring devices) that can be read by community members. Relatedly, research to inform *action that liberates communities from structural and systemic inequities* can base its choice of CER methods not only on collaborators' research questions and how they will use the resulting data, but also on considerations of how the research process itself could best strengthen the community's ability to create knowledge that builds its power. Which research capacities does the local organization want to learn, which constituencies does it want to engage in conducting or informing the research, and what does the organization most want to develop in its membership (e.g., Freirean or feminist consciousness, new organizational alliances for community building, or the creation of alternative local economic organizations)?

Certain methods may advance the goals of *building community capacities to produce and disseminate knowledge* and *sharing resources* with community organizations that typically accrue to academic researchers, such as equipment, expertise, or funding to staff a project. Different organizing approaches may prioritize the development of different capacities and resources. For example, organizers engaged in community building may choose methods that can help attract funding to hire and train staff in conflict resolution, community consultation, or community arts, while Alinskyite organizers may prefer methods that can pay staff with skills in recruiting participants and power analysis. The choice of methods can also be guided by organizers' particular approaches to *co-creating knowledge by reducing hierarchies between credentialed researchers and community members*. Feminist organizers, for example, may prioritize methods that elevate the status of personal and collective testimony (such as oral histories or the use of *promotoras* to conduct community health surveys), while transformative organizers may focus on methods that elicit local wisdom and values to inform participatory planning or healing of collective trauma (such as community charrettes or restorative justice processes). Organizers can also prefer different applications of research methods to *respect community-based knowledge, cultures, and assets*. While some organizers may choose methods that publicize local knowledge, other organizers may be most concerned with restricting access to this knowledge. Indigenous communities, for example, increasingly defend their sovereignty by asserting their rights to collective consent to participate in research, and to exercise ownership and control over disseminating data gathered about their lands, cultural artifacts, DNA, and more (Carroll et al. 2019; RDAIIDSIG 2019). In these communities, organizers are unlikely to welcome crowdsourced projects that publicize the location of sacred sites, which are vulnerable to vandalism, or that make genomic data publicly available for exploitation by other researchers.

In future research, CER practitioners and community collaborators can develop theory and data about the causes, process, and outcomes of their decisions to choose and combine organizing strategies and research methods. To what extent are these decisions directed by attention to aligning research methods and organizing techniques? Which kinds of researchers and community organizations are most and least attentive to this alignment? How could these considerations be integrated more fully into CER training for all researchers and community partners, and in participatory evaluations of CER projects? Most importantly, how does thoughtful alignment of techniques for research and for organizing contribute to short-term organizing accomplishments and long-term community power building for justice, equity, and transformative social change?

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Notes

¹ Several handbooks summarize research and theory on organizing (e.g., Weil et al. 2013) and social movements (e.g., Della Porta and Diani 2015). Practical guides to community organizing include Bobo et al. (2010), Pyles (2021), Sen (2003), and Staples (2016). Myers-Lipton (2023) provides a guide to campus and community organizing for college students. Curricula on how to do research for organizing and campaigns with environmental justice examples include DataCenter (2015) and UCDEHSCC and UMLEEDCC (2018).

² By normative theory, we mean theory primarily concerned with the development and application of standards and values, rather than with empirical description, control, and prediction of phenomena.

References

- Alinsky, Saul D. 1971. *Rules for Radicals: A Practical Primer for Realistic Radicals*. New York: Vintage.
- Allen, Barbara L. 1997. Women scientists and feminist methodologies in Louisiana's chemical corridor. *Michigan Feminist Studies* 13: 89–110.
- Anguelovski, Isabelle, Anna Livia Brand, Eric Chu, and Kian Goh. 2018. Urban planning, community (re)development, and environmental gentrification: Emerging challenges for green and equitable neighborhoods. In *The Routledge Handbook of Environmental Justice*. Edited by Ryan Holifield, Jayajit Chakraborty and Gordon Walker. New York: Routledge, pp. 449–62.
- Balazs, Carolina L., and Rachel Morello-Frosch. 2013. The three Rs: How community-based participatory research strengthens the rigor, relevance, and reach of science. *Environmental Justice* 6: 9–16. [CrossRef] [PubMed]
- Baptista, Ana, Martha Matsuoka, and Chad Raphael. 2024. Urban and regional planning. In *Ground Truths: Community-Engaged Research for Environmental Justice*. Edited by Chad Raphael and Martha Matsuoka. Oakland: University of California Press—Luminos.
- Bedoya, Roberto. 2012. The Politics of Belonging and Dis-Belonging. *Arts in a Changing America*. Available online: <https://artsinachangingamerica.org/creative-placemaking-and-the-politics-of-belonging-and-dis-belonging/> (accessed on 14 April 2023).
- Blanusa, Mary, Stacey Chen, and Nathan Huttner. 2018. Grassroots Rising: Building Movements for Action. Available online: https://www.redstonestrategy.com/wp-content/uploads/2018/03/2018-10-04-Grassroots-Rising_shareable.pdf (accessed on 14 April 2023).
- Boal, Augusto. 1979. *Theater of the Oppressed*. London: Pluto Press.
- Boal, Augusto. 2005. *Legislative Theatre: Using Performance to Make Politics*. New York: Routledge.
- Bobo, Kim, Jackie Kendall, and Steve Max. 2010. *Organizing for Social Change*, 4th ed. Santa Ana: Forum Press.
- Bond, Becky, and Zack Exley. 2016. *Rules for Revolutionaries: How Big Organizing can Change Everything*. White River Junction: Chelsea Green Publishing.
- Cable, Sherry, Tamara Mix, and Donald Hastings. 2005. Mission impossible? Environmental justice activists' collaborations with professional environmentalists and with academics. In *Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement*. Edited by David N. Pellow and Robert J. Brulle. Cambridge: MIT Press, pp. 55–75.
- Cacari-Stone, Lisa, Meredith Minkler, Freudenberg Nicholas, and Themba Makani N. 2017. Community-based participatory research for health equity policy making. In *Community-Based Participatory Research for Health: Advancing Social and Health Equity*, 3rd ed. Edited by Nina Wallerstein, Bonnie Duran, John G. Oetzel and Meredith Minkler. San Francisco: Jossey-Bass, pp. 277–92.
- Carroll, Stephanie Russo, Desi Rodriguez-Lonebear, and Andrew Martinez. 2019. Indigenous data governance: Strategies from United States Native Nations. *Data Science Journal* 18: 31. [CrossRef] [PubMed]
- Chevalier, Jacques M., and Daniel J. Buckles. 2019. *Participatory Action Research: Theory and Methods for Engaged Inquiry*, 2nd ed. New York: Routledge.
- Cole, Luke W. 1992. Macho law brains, public citizens, and grassroots activists: Three models of environmental advocacy. *Virginia Environmental Law Journal* 14: 687–710.
- Cole, Luke W., and Sheila R. Foster. 2001. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York: NYU Press.
- Collins, Patricia Hill. 1990. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. New York: Routledge.
- Cooper, Caren B., Chris L. Hawn, Lincoln R. Larson, Julia K. Parrish, Gillian Bowser, Darlene Cavalier, Robert R. Dunn, Mordechai (Muki) Haklay, Kaberi Kar Gupta, Na'Taki Osborne Jelks, and et al. 2021. Inclusion in citizen science: The conundrum of rebranding. *Science* 372: 1386–88. [CrossRef]

- DataCenter. 2015. An Introduction to Research Justice. Available online: http://www.datacenter.org/wp-content/uploads/Intro_Research_Justice_Toolkit_FINAL1.pdf (accessed on 14 April 2023).
- Davies, Thom, and Alice Mah, eds. 2020. *Toxic Truths: Environmental Justice and Citizen Science in A Post-Truth Age*. Manchester: Manchester University Press.
- Della Porta, Donatella, and Mario Diani, eds. 2015. *The Oxford Handbook of Social Movements*. Oxford: Oxford University Press.
- Di Chiro, Giovanna. 2021. Mobilizing ‘intersectionality’ in environmental justice research and action in a time of crisis. In *Environmental Justice: Key Issues*. Edited by Brendan Coolsaet. New York: Routledge, pp. 316–33.
- Dixon, Chris. 2014. *Another Politics: Talking across Today’s Transformative Movements*. Berkeley: University of California Press.
- Environmental Health Coalition. 2004. The Science of Precaution: Barrio Logan residents use research and land use planning to prevent harm. *Race, Poverty & the Environment* 11: 53–5.
- Environmental Health Coalition. 2005. *Reclaiming Old Town National City: A Community Survey*. National City: Environmental Health Coalition.
- Environmental Health Coalition. n.d. Frontera 2025: Analysis of Waste and Socio-Environmental Vulnerability in the Arroyo Alamar. Available online: [https://www.environmentalhealth.org/campaigns/frontera-2025-analysis-of-waste-socio-environmental-vulnerability-in-the-arroyo-alar/](https://www.environmentalhealth.org/campaigns/frontera-2025-analysis-of-waste-socio-environmental-vulnerability-in-the-arroyo-alar) (accessed on 14 April 2023).
- Fine, Michelle, and María Elena Torre. 2019. Critical participatory action research: A feminist project for validity and solidarity. *Psychology of Women Quarterly* 43: 433–44. [CrossRef]
- Fisher, Robert, Yuseph Katiya, Christopher Reid, and Eric Shragge. 2013. We are radical: The Right to the City Alliance and the future of community organizing. *Journal of Sociology & Social Welfare* 40: 157–82.
- Freire, Paulo. 1970. *The Pedagogy of the Oppressed*. New York: Seabury Press.
- Freire, Paulo. 1982. Creating alternative research methods: Learning to do it by doing it. In *Creating Knowledge: A Monopoly?* Edited by Budd Hall, Arthur Gillette and Rajesh Tandon. New Delhi: Society for Participatory Research in Asia, pp. 29–37.
- Frickel, Scott, Rebekah Torcasso, and Annika Anderson. 2015. The organization of expert activism: Shadow mobilization in two social movements. *Mobilization: An International Quarterly* 20: 305–23. [CrossRef]
- Gaard, Greta. 2018. Feminism and environmental justice. In *The Routledge Handbook of Environmental Justice*. Edited by Ryan Holifield, Jayajit Chakraborty and Gordon Walker. New York: Routledge, pp. 74–88.
- Gauderman, W. James, Edward Avol, Frank Gilliland, Hita Vora, Duncan Thomas, Kiros Berhane, Rob McConnell, Nino Kuenzli, Fred Lurmann, Edward Rappapor, and et al. 2004. The effect of air pollution on lung development from 10 to 18 years of age. *New England Journal of Medicine* 351: 1057–67. [CrossRef]
- Giancattarino, Anthony. 2018. Collaborating for Bold Possibilities: The Ecosystem of Networks Advancing a Just Transition. Available online: https://climatejusticealliance.org/wp-content/uploads/2018/10/Collaborating-for-Bold-Possibilities_FINAL_830_TO-PRINT_SPREAD.pdf (accessed on 14 April 2023).
- González, Erualdo Romero, Raul P. Lejano, Guadalupe Vidales, Ross F. Conner, Yuki Kidokoro, Bahram Fazeli, and Robert Cabrales. 2007. Participatory action research for environmental health: Encountering Freire in the urban barrio. *Journal of Urban Affairs* 29: 77–100. [CrossRef]
- Gordon da Cruz, Cynthia. 2017. Critical community-engaged scholarship: Communities and universities striving for racial justice. *Peabody Journal of Education* 92: 363–84. [CrossRef]
- Grosse, Corrie. 2019. Climate justice movement building: Values and cultures of creation in Santa Barbara, California. *Social Sciences* 8: 79. [CrossRef]
- Gutierrez, Lorraine M., and Edith A. Lewis. 2022. Education, participation, and capacity building in community organizing with women of color. In *Community Organizing and Community Building for Health and Social Equity*, 4th ed. Edited by Meredith Minkler and Patricia Wakimoto. New Brunswick: Rutgers University Press, pp. 205–19.
- Haklay, Muki, and Louise Francis. 2018. Participatory GIS and community-based citizen science for environmental justice action. In *The Routledge Handbook of Environmental Justice*. Edited by Ryan Holifield, Jayajit Chakraborty and Gordon Walker. Abingdon and New York: Routledge, pp. 297–308.
- Hawkins, Robert L., and Katherine Maurer. 2010. Bonding, bridging and linking: How social capital operated in New Orleans following Hurricane Katrina. *British Journal of Social Work* 40: 1777–93. [CrossRef]
- Holifield, Ryan, Jayajit Chakraborty, and Gordon Walker, eds. 2018. *The Routledge Handbook of Environmental Justice*. New York: Routledge.
- ICPHR (International Collaboration for Participatory Health Research). 2013. *Position Paper 1: What Is Participatory Health Research?* Version: Mai 2013. Berlin: International Collaboration for Participatory Health Research.
- Illner, Peer. 2021. *Disasters and Social Reproduction: Crisis Response between the State and Community*. London: Pluto Press.
- Israel, Barbara A., Eugenia Eng, Amy J. Schulz, and Edith A. Parker, eds. 2013. *Methods for Community-Based Participatory Research for Health*, 2nd ed. San Francisco: Jossey-Bass.
- Jerrett, Michael, Ketan Shankardass, Kiros Berhane, W. James Gauderman, Nino Künzli, Edward Avol, Frank Gilliland, Fred Lurmann, Jassy N. Molitor, John T. Molitor, and et al. 2008. Traffic-related air pollution and asthma onset in children: A prospective cohort study with individual exposure measurement. *Environmental Health Perspectives* 116: 1433–38. [CrossRef] [PubMed]
- LeQuésne, Theo. 2019. Petro-hegemony and the matrix of resistance: What can Standing Rock’s water protectors teach us about organizing for climate justice in the United States? *Environmental Sociology* 5: 188–206. [CrossRef]
- Lerner, Josh A. 2014. *Making Democracy Fun: How Game Design Can Empower Citizens and Transform Politics*. Cambridge: MIT Press.
- Macy, Joanna, and Chris Johnstone. 2012. *Active Hope: How to Face the Mess We’re in Without Going Crazy*. Novato: New World Library.

- Mann, Eric. 2011. *Playbook for Progressives: 16 Qualities of the Successful Organizer*. Boston: Beacon Press.
- Martinson, Marty, and Celina Su. 2022. Contrasting Organizing Approaches: The 'Alinsky Tradition' and Freirean Organizing Approaches. In *Community Organizing and Community Building for Health and Social Equity*, 4th ed. Edited by Meredith Minkler and Patricia Wakimoto. New Brunswick: Rutgers University Press, pp. 59–77.
- Matsuoka, Martha. 2017. Democratic Development for Thriving Communities: Framing the Issues, Solutions, and Funding Strategies to Address Gentrification and Displacement. Available online: https://d3n8a8pro7vhm.cloudfront.net/nfg/pages/476/attachments/original/1501798462/Democratic_Development_Report.pdf?1501798462 (accessed on 14 April 2023).
- McKay, Steven, and Claudia Lopez, eds. 2022. New trends in community-engaged research: Co-producing knowledge for justice. *Social Sciences*, 11. Available online: https://www.mdpi.com/journal/socsci/special_issues/community_research_policy (accessed on 28 May 2023).
- McKnight, John L., John P. Kretzmann, and Lionel J. Beaulieu. 2022. Mapping community capacities. In *Community Organizing and Community Building for Health and Social Equity*, 4th ed. Edited by Meredith Minkler and Patricia Wakimoto. New Brunswick: Rutgers University Press, pp. 166–82.
- Minkler, Meredith, and Patricia Wakimoto, eds. 2022. *Community Organizing and Community Building for Health and Social Equity*, 4th ed. New Brunswick: Rutgers University Press.
- Minkler, Meredith, Analilia P. Garcia, Joy Williams, Tony LoPresti, and Jane Lilly. 2010. Sí se puede: Using participatory research to promote environmental justice in a Latino community in San Diego, California. *Journal of Urban Health* 87: 796–812. [CrossRef]
- Minkler, Meredith, R. David Rebanal, Robin Pearce, and Maria Acosta. 2019. Growing equity and health equity in perilous times: Lessons from community organizers. *Health Education & Behavior* 46: 9S–18S.
- Movement Generation Justice and Ecology Project. n.d. From Banks and Tanks to Cooperation and Caring. Available online: https://movementgeneration.org/wp-content/uploads/2016/11/JT_booklet_English_SPREADs_web.pdf (accessed on 14 April 2023).
- Myers-Lipton, Scott. 2023. *Change! A Student Guide to Social Action*, 2nd ed. New York: Routledge.
- Norsigian, Judy. 2011. *Our Bodies, Ourselves*. New York: Atria.
- Parachini, Larry, and Andrew Mott. 1997. Strengthening Community Voices in Policy Reform: Community-Based Monitoring, Learning and Action Strategies for an Era of Devolution and Change. Available online: <http://communitylearningpartnership.org/wp-content/uploads/2017/01/STRENGTHENING-COMMUNITY-VOICES-final-version-1.pdf> (accessed on 14 April 2023).
- Pastor, Manuel, Chris Benner, and Martha Matsuoka. 2009. *This Could Be the Start of Something Big: How Social Movements for Regional Equity are Reshaping Metropolitan America*. Ithaca: Cornell University Press.
- Pastor, Manuel, Jennifer Ito, and Rachel Rosner. 2011. *Transactions Transformations Translations: Metrics that Matter for Building, Scaling, and Funding Social Movements*. Los Angeles: USC Program for Environmental and Regional Equity.
- Peoples, Jennifer A., and Kevin M. DeLuca. 2006. The truth of the matter: Motherhood, community and environmental justice. *Women's Studies in Communication* 29: 59–87. [CrossRef]
- Perez, Alejandro Colsa, Bernadette Grafton, Paul Mohai, Rebecca Hardin, Katy Hintzen, and Sara Orvis. 2015. Evolution of the environmental justice movement: Activism, formalization and differentiation. *Environmental Research Letters* 10: 105002. [CrossRef]
- Prado, Carolina, Colectivo Salud y Justicia Ambiental, and Red de Ciudadanos para el Mejoramiento de las Comunidades. 2021. Border environmental justice PPGIS: Community-based mapping and public participation in Eastern Tijuana, México. *International Journal of Environmental Research and Public Health* 18: 1349. [CrossRef]
- Pulido, Laura. 2017. Conversations in environmental justice: An Interview with David Pellow. *Capitalism Nature Socialism* 28: 43–53. [CrossRef]
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Pyles, Loretta. 2021. *Progressive Community Organizing: Transformative Practice in a Globalizing World*, 3rd ed. New York: Routledge.
- Rainey, Shirley A., and Glenn S. Johnson. 2009. Grassroots activism: An exploration of women of color's role in the environmental justice movement. *Race, Gender & Class* 16: 144–73.
- Raphael, Chad, and Martha Matsuoka. 2024. *Ground Truths: Community-Engaged Research for Environmental Justice*. Oakland: University of California Press—Luminos.
- RDAIIDSIG (Research Data Alliance Indigenous Data Sovereignty Interest Group). 2019. CARE Principles for Indigenous Data Governance. The Global Indigenous Data Alliance. Available online: <https://www.gida-global.org/care> (accessed on 29 May 2023).
- Rivera, Felix G., and John Erlich. 1998. *Community Organizing in a Diverse Society*. Boston: Allyn and Bacon.
- Rodríguez, Iokiñe, and Mirna Liz Inturias. 2018. Conflict transformation in Indigenous peoples' territories: Doing environmental justice with a 'decolonial turn'. *Development Studies Research* 5: 90–105. [CrossRef]
- Ross, Loretta, Elena Gutiérrez, Marlene Gerber, and Jael Silliman. 2016. *Undivided Rights: Women of Color Organizing for Reproductive Justice*, 2nd ed. Chicago: Haymarket Books.
- Scandrett, Eurig. 2007. Environmental justice in Scotland: Policy, pedagogy and praxis. *Environmental Research Letters* 2: 045002. [CrossRef]
- Schiffer, Eva. 2007. *The Power Mapping Tool: A Method for the Empirical Research of Power Relations*. Washington, DC: International Food Policy Research Institute.
- Schlosberg, David. 1999. Networks and mobile arrangements: Organisational innovation in the U.S. environmental justice movement. *Environmental Politics* 8: 122–48.
- Sen, Rinku. 2003. *Stir It Up: Lessons in Community Organizing and Advocacy*. San Francisco: Jossey-Bass.

- Silliman, Jael. 1997. Making the connections: Women's health and environmental justice. *Race, Gender & Class* 5: 104–29.
- Skocpol, Theda. 2013. Naming the problem: What it will take to counter extremism and engage Americans in the fight against global warming. Paper presented at the Symposium on the Politics of America's Fight Against Global Warming, Harvard University, Cambridge, MA, USA, 14 February.
- Smith, Linda Tuhiwai. 2021. *Decolonizing Methodologies: Research and Indigenous Peoples*, 3rd ed. London: Zed Books.
- Smock, Kristina. 2004. *Democracy in Action: Community Organizing and Urban Change*. New York: Columbia University Press.
- Solis, Miriam, Martha Matsuoka, and Chad Raphael. 2024. Community economic development. In *Ground Truths: Community-Engaged Research for Environmental Justice*. Edited by Chad Raphael and Martha Matsuoka. Oakland: University of California Press—Luminos.
- SouthWest Organizing Project. 1990. Letter to Big Ten Environmental Groups. Available online: <http://www.ejnet.org/ej/swop.pdf> (accessed on 14 April 2023).
- Speer, Paul W., and Hahrie C. Han. 2018. Re-engaging social relationships and collective dimensions of organizing to revive democratic practice. *Journal of Social and Political Psychology* 6: 745–58. [CrossRef]
- Stall, Susan, and Randy Stoecker. 2005. Toward a gender analysis of community organizing models. In *Community Organizing and Community Building for Health*, 2nd ed. Edited by Meredith Minkler. New Brunswick: Rutgers University Press, pp. 196–217.
- Staples, Lee. 2016. *Roots to Power: A Manual for Grassroots Organizing*, 3rd ed. Santa Barbara: Praeger.
- Staudt, Kathleen, Guadalupe Márquez-Velarde, and Mosi Dane'el. 2013. Stories, science, and power in policy change: Environmental health, community-based research, and community organizing in a US-Mexico border colonia. *Environmental Justice* 6: 191–99. [CrossRef]
- Stearney, Lynn M. 1994. Feminism, ecofeminism, and the maternal archetype: Motherhood as a feminine universal. *Communication Quarterly* 42: 145–59. [CrossRef]
- Sullivan, John, and Juan Parras. 2008. Environmental justice and Augusto Boal's Theatre of the Oppressed: A unique community tool for outreach, communication, education and advocacy. *Theory in Action* 1: 20–39. [CrossRef]
- Szreter, Simon, and Michael Woolcock. 2004. Health by association? *Social capital, social theory, and the political economy of public health*. *International Journal of Epidemiology* 33: 650–67. [PubMed]
- Takvorian, Diane, Paula Forbis, Sonya Holmquist, Tony LoPresti, and Laura Benson. 2008. Community planning for power. *Race, Poverty & the Environment* 15: 76–8.
- Taylor, Dorceta E. 2015. Gender and racial diversity in environmental organizations: Uneven accomplishments and cause for concern. *Environmental Justice* 8: 165–80. [CrossRef]
- UCDEHSCC and UMLEEDCC (University of California Davis Environmental Health Sciences Core Center and University of Michigan Ann Arbor Michigan Lifestage Environmental Exposure and Disease Core Center). 2018. Building Equitable Partnerships for Environmental Justice. Available online: <https://environmentalhealth.ucdavis.edu/sites/g/files/dgvnsk2556/files/inline-files/building-equitable-partnerships-for-environmental-justice.pdf> (accessed on 14 April 2023).
- USC PERE. 2018. California Health and Justice for All Power-Building Landscape: A Preliminary Assessment. Available online: https://dornsife.usc.edu/assets/sites/242/docs/TCE_PLA_Memo2_FINAL.pdf (accessed on 14 April 2023).
- Wallerstein, Nina, Bonnie Duran, John G. Oetzel, and Meredith Minkler, eds. 2017. *Community-Based Participatory Research for Health: Advancing Social and Health Equity*, 3rd ed. San Francisco: Jossey-Bass.
- Walter, Cheryl L., and Cheryl A. Hyde. 2012. Community building practice: An expanded conceptual framework. In *Community Organizing and Community Building for Health*, 3rd ed. Edited by Meredith Minkler. New Brunswick: Rutgers University Press, pp. 78–90.
- Warren, Roland L. 1963. *The Community in America*. Chicago: Rand McNally.
- Weil, Marie, Michael S. Reisch, and Mary L. Ohmer, eds. 2013. *The Handbook of Community Practice*. Los Angeles: Sage Publications.
- Willow, Anna J. 2013. Doing sovereignty in Native North America: Anishinaabe counter-mapping and the struggle for land-based self-determination. *Human Ecology* 41: 871–84. [CrossRef]
- Zimmerman, Kristen, Neelam Pathikonda, Brenda Salgado, and Taj James. 2010. *Out of the Spiritual Closet: Organizers Transforming the Practice of Social Justice*. Oakland: Movement Strategy Center.

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