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Introduction to Empowered Partnerships: Community-Based Participatory Action Research for Environmental Justice

Christopher Bacon, Saneta deVuono-Powell, Mary Louise Frampton, Tony LoPresti, and Camille Pannu

ABSTRACT

This article introduces a special section on empowered partnerships that deepens a dialogue initiated during the 2010 symposium titled EmPowered Partnerships: Community-Based Participatory Action Research for Environmental Justice. The articles in this section will be divided between issues 1 and 2 of the Journal. After briefly reviewing the definitions and the steps associated with community-based participatory action research (CBPAR), we identify the synergies connecting the underlying principles and values of the environmental justice (EJ) movement and CBPAR. The principles-based comparison is part of an ongoing effort to craft a framework that produces research partnerships that are simultaneously more responsive to community aspirations and increase the rigor and accuracy of the findings. The action step is among the most difficult challenges for both CBPAR and EJ processes; we address this challenge as we encourage partners to think more strategically about the role of law and legal scholarship. This article closes with insight from environmental justice leaders that participated in this symposium and introductions to the in-depth case studies in rural and urban settings and from both ends of the university-community partnerships that constitute this special section. The articles that make up this section unpack empowered partnerships in practice and explore the scientific, cultural, institutional, and democratic pitfalls and possibilities in this arena of inquiry and social action.

I. INTRODUCTION

THE ENVIRONMENTAL JUSTICE (EJ) movement has reached an evolutionary crossroads in advancing a socially just and equitable vision for organizing our communities, our economy, and our society. As media and policy attention increasingly focus on climate change, drought, and ecological collapse, EJ advocates and communities have stepped forward to provide an alternative vision for progress. Their policy efforts are inextricably linked to rigorous, meaningful, and "bottomup" research that enables communities to mobilize for action and change. Given the underlying principles and values of the EJ movement, community-based participatory action research (CBPAR) offers a powerful approach for creating partnerships that connect community members with academic researchers to generate new knowledge and social change.

Like CBPAR, EJ places community agency at the center of its theory of change. Drawing on the experiences and stories of communities, EJ embraces the tenet that "we [the impacted community] speak for ourselves."¹ EJ prioritizes capacity-building, drawing upon a "power model" of social change that directly addresses historic inequalities between decision makers and the residents who must live with those decisions.² Responsive technical

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¹First National People of Color Environmental Leadership Summit, *Principles of Environmental Justice*, Oct. 24–27, 1991, Washington, DC, *available at* < http://www.ejnet.org/ej/principles .html> (last accessed Apr. 24, 2012).

²Luke W. Cole, "Macho Law Brains, Public Citizens, and Grassroots Activists: Three Models of Environmental Advocacy," 14 *Virgina Environmental Law Journal* 687, 697–703 (1994–95).

support from scientists, planners, lawyers, and other academics strengthens EJ advocacy efforts to challenge the root causes of environmental racism.

In contrast, the predominant model for "traditional" research methodologies usually divorces community participation from the research and analytic process. As a result, individuals and communities become objects of study instead of dynamic actors in research. Rather than involving communities in the research process or consult on the results of a study, traditional academic research embraces an "arms-length" relationship with community members, viewing studied communities as potential sources of "contamination" to data that is gathered and later analyzed. In this framework, studied communities often express frustration regarding their contribution of time and effort to research that provides limited utility to their social movements and struggles. Even well-intentioned researchers risk developing research relationships that may be extractive, disempowering, stigmatizing, or harmful to a community's campaign for justice.

CBPAR weaves together several currents in the academy and the environmental justice movement. Universities have identified the need for methods to democratize science,³ improve the on-the-ground value and accuracy of research,⁴ and build ongoing partnerships between universities and local communities.⁵ At the same time, the EJ movement has positioned itself to impact policy debates at every level.⁶ Movement leaders have recognized the need for research that clarifies their standing and articulates their demands for healthy communities and equitable development. As the synergy between CBPAR and EJ gains traction, would-be practitioners and stakeholders have sought to understand how to use CBPAR effectively while navigating the inherent challenges involved.

This special section of *Environmental Justice*, divided between issues 1 and 2 of the Journal, shares insights and deepens the dialogue initiated during the Honorable Thelton E. Henderson Center for Social Justice at Berkeley Law's Fall 2010 symposium, *EmPOWERed Partnerships: Community-Based Participatory Action Research for Environmental Justice*. The conference, organized in collaboration with leading California EJ organizations, created a space for leadership from the EJ movement to engage researchers, students, policymakers, and other EJ organizations in building robust partnerships to advance socially equitable public policies.⁷ The symposium had three interlocking goals: (1) To provide opportunities for academics to learn how CBPAR can strengthen and enrich their research; (2) to demonstrate how CBPAR can inform and advance EJ campaigns; (3) to identify how academic institutions can better support and integrate CBPAR into student advising, methods courses, funding opportunities, and tenure review.

The conference united a variety of practitioners and experts across disciplines in an effort to reflect on past partnerships and encourage the development of new, improved collaborations. A diverse array of academic fields and disciplines were represented, including lawyers, geographers, political ecologists, economists, public health professionals, and planners. Representatives from many of California's leading EJ groups participated in designing the symposium and EJ groups from across the U.S. and Canada attended. The conversations, presentations, and interactive forums during this two-day symposium examined several case studies and explored how empowered partnerships can generate knowledge and social change.

The articles here and in the next issue contribute to crafting a framework that fosters research which produces more accurate findings while simultaneously responding to community aspirations. They will also deepen the conceptual engagement with the political, legal, and cultural dimensions of policy change. Lessons learned from in-depth case studies in rural and urban settings, domestic and international places, and, from both ends of the university-community partnerships will generate insights concerning strengths, weaknesses, pitfalls, and possibilities in this arena of inquiry and social action.

In this introduction, we draw on prior literature to define CBPAR and explore its intersections with the principles of environmental justice. We also begin to explore how interdisciplinary collaboration and the integration of legal expertise, in particular, can help realize the action component that is central to a holistic CBPAR project. Finally, we introduce the contributions to this special issue.

II. COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH

CBPAR seeks to both complement conventional research and to challenge it to expand its reach. The benefits

³See generally Louise Fortmann (ed.), Participatory Research in Conservation and Rural Livelihoods: Doing Science Together (2008).

⁴Carolina Balazs and Rachel Morello-Frosch "The Three R's: How Community Based Participatory Research Strengthens the Rigor, Relevance and Reach of Science," *infra* p. 10 (2013).

⁵Malo Andre Hutson, "Where is the 'Public' in Public Universities?," *infra* p. 27 (2013).

⁶There are dozens of examples of environmental justice groups scaling up policy advocacy over the last two decades. For instance, after a long period of planning, six grassroots environmental justice organizations in California joined together in 2006, to form the California Environmental Justice Alliance (CEJA) to work on statewide policies. Similar efforts have taken place in other regions of the country through alliances such as the New York Environmental Justice Alliance and the Indigenous Environmental Network.

⁷See conference website for details and agenda: <http:// www.law.berkeley.edu/9320.htm>. The conference was cosponsored by the Center on Race, Poverty & the Environment; Communities for a Better Environment; Asian Pacific Environmental Network; West Oakland Environmental Indicators Project; jPODER!—People Organizing to Demand Environmental and Economic Rights; California Rural Legal Assistance, Inc.; California Environmental Justice Alliance; Greenaction for Health and Environmental Justice; Pacific Institute; Environmental Studies Institute at Santa Clara University; Central Valley Air Quality Coalition; Students for Environmental and Economic Justice; Cal Corps; La Raza Law Students Association; Berkeley La Raza Law Journal; *Ecology Law Quarterly; California Law Review;* and the Women of Collective at Boalt Hall.

of traditional research are significant. Indeed, the knowledge generated from experimental, arms-length, scientific research is critical to the CBPAR analysis. Useful findings can range from air quality and human health studies, to demographic, biophysical research and critical social theory. However, most EJ and other communitybased groups are demanding real-time research that serves their campaign objectives and are less interested in academic career building.

A growing constellation of participatory research approaches share most of the same principles and starting assumptions with CBPAR, however, there are a few differences in emphasis. One of the key founding roots of this approach connects to the search for more democratic and engaged forms of classroom-based education led by scholars such as Dewy and Freire. Participatory approaches started to gain acceptance in international rural development circles in 1970s and 1980s as the work of Chambers encouraged project planners to diversify voices that informed their projects and avoid costly top down and often irrelevant diagnostic research projects in favor of rapid rural appraisals.8 These goals were partially accomplished through methodological changes that favored focus groups, community-mapping activities, and timelines over desk-based research and externally designed and implemented surveys. However, Chambers and other pioneers quickly became frustrated as they witnessed the way that many planners and funders simply added a "participatory" appraisal on the front end of a larger intervention that essentially remained unchanged.9

Participatory action research (PAR) soon moved to the forefront as an approach that placed greater emphasis on the action and social change outcomes.¹⁰ PAR approaches found their way into many enterprises and endeavors, ranging from agricultural extension to businesses that use this methodology to improve product design and support innovation.¹¹ PAR approaches are not necessarily community-based. This brings us to a final distinction between two very similar approaches, differences that are likely more connected to discipline-based vocabulary (i.e., development studies, geography, or public health) than substantive disparities. A focus on people and prevention led many pioneer public health scholars, often working with marginal communities in urban environments, to elaborate and practice community-based participatory research (CBPR) approaches.¹² CBPR approaches are very similar to CBPAR and share an emphasis on the agency and capacity of communities, and will be used interchangeably in this article. It is possible that the CBPAR approach could place a stronger emphasis on the action step, but this is more dependent upon those involved in any specific process than including the word "action" in the name. CBPAR prioritizes partnerships, feedback models, and community agency in defining research problems, guiding processes, and reporting on results. In turn, the results of these studies often help move policy and create a more culturally relevant body of literature.

As CBPAR gains traction within the academy, stakeholders continually define and redefine its parameters. CBPAR's core objectives are clear: cultivate equality and democracy in the relationship between community and researcher, and use the process of formulating a research product, and the product itself, to strengthen substantive work of both the academy and the community partner. One commonly accepted definition of CBPAR states that the method is

a participatory, democratic process concerned with developing practical knowledge in the pursuit of worthwhile human purposes . . . It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities.¹³

There are several ways to conceptualize the overlapping steps that constitute the cyclical and iterative nature of many CBPAR processes. CBPAR begins with a partnership connecting researchers and community members. It continues through iterative processes of research, reflection/ analysis, and action. The typical steps are summarized in Figure 1. However, adherence to bundle interconnected guiding principles is often more important than the specific methods used during an specific step in the cycle.¹⁴

First, community partners play a central role in defining the research agenda and project design. While researchers are aware of their own professional needs and pressing theoretical questions within their academic fields, these priorities do not often align with needs on the ground. Instead of predetermining a project and then asking community members to sign off, CBPAR collaboration should begin at the earliest stages of the research process. Partners work through a mutual, iterative dialogue to arrive at a project proposal that harmonizes stakeholder needs, capacities, and methods. Through this dialogue, the researcher and participants have a clear understanding of project expectations and benefits. All partners make an intentional effort to communicate why they are pursuing the project and what they hope to gain from it.¹⁵

⁸R. Chambers, "Rapid rural appraisal: rationale and repertoire," 1 *Public Administration and Development* 95–106 (1981).

⁹R. Chambers, Whose reality counts?: Putting the first last. Intermediate Technology, London (1997).

¹⁰D. Selener, *Participatory action research and social change*. Cornell University Press, Ithaca, NY, USA. (1997).

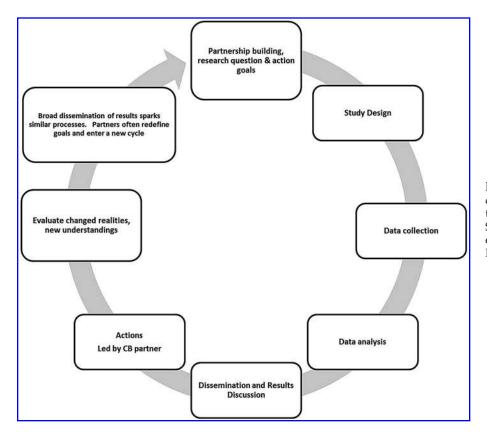
¹¹S. Ottosson, "Participation action research-: A key to improved knowledge of management," 23 *Technovation* 87–94 (2003).
¹²Meredith Minkler and Nina Wallerstein (eds.), *Community*

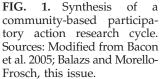
¹²Meredith Minkler and Nina Wallerstein (eds.), *Community Based Participatory Research for Health* (2003); *see also* Green, et al., *Study of Participatory Research in Health Promotion*, Ottowa: Royal Society of Canada (1994).

¹³Peter Reason and Hilary Bradbury (eds.), *Handbook of Action Research: Participative Inquiry and Practice* 1, SAGE Publications: London (2001).

London (2001). ¹⁴Peggy M. Shepard, "Advancing Environmental Justice Through Community-Based Participatory Research," 110 *Environmental Health Perspectives* 139–140 (2002).

¹⁵Christopher M. Bacon, V. E. Mendez, and Martha Brown. Participatory action research and support for community development and conservation: examples from shade coffee landscapes in Nicaragua and El Salvador. Center for Agroecology and Sustainable Food Systems, Research Briefs, University of California. Santa Cruz, CA (2005).





Second, CBPAR collaborations include an intentional effort to engage community members in conducting the research. This principle can take many shapes: community members may "groundtruth" geographic information systems (GIS) data by checking maps against existing conditions, conduct air sampling, connect researchers to key players in a community, or help create and conduct a survey. This principle builds accuracy, ownership, and skills that contribute to empowerment.

Increased accuracy, ownership, and empowerment generate immediate and long-term benefits for both researcher and community. When community members walk blockby-block with maps and markers in hand, they are able to hone final maps that actually reflect their community, not the latest computer-generated data. Only residents can conduct this street science as they measure air quality when they smell odors or witness risky environmental behavior.¹⁶ Further, community leaders often act as the "bridge of trust" between researchers and their communities. This bridge allows researchers to interview key players in contentious debates or to collect survey data from a community that may otherwise be suspicious and unwilling to respond.

Beyond accuracy, though, participatory research builds a sense of ownership over the project and end product. When community members provide their time, knowledge, and networks to move a project, they value their contribution as indispensable to the project. They understand that the research belongs to them, not just the research lead. Finally, participation builds empowerment as shared knowledge can leverage power. Community members often learn about the potential influence and purpose of research as they participate. For instance, once a community member understands that they can conduct air sampling to document exposure and compile measurements taken by their neighbors, they can use this data to influence decisions that impact their environmental health.

Third, CBPAR relationships are rooted in trust and mutual accountability and thus require consistent communication. Given the history of unequal relationships between academies and marginalized communities, researchers must often earn the trust of community leaders and residents in order to move forward.¹⁷ Likewise, over time researchers must also trust their community partners on issues ranging from data accuracy to financial management. EJ advocates have criticized researchers for presenting proposals to gain initial approval, only to drop all communication until an article is published. This lack of communication turns communities into passive subjects and undermines the core values of a partnership.

CBPAR demands consistent communication, using feedback loops that improve accountability between the

¹⁶Jason Corburn, *Street Science: Community Knowledge and Environmental Health Justice*, MIT Press: Cambridge, MA (2005).

¹⁷O. Fals–Borda and M.A. Rahman, Action and Knowledge: Breaking the Monopoly with Participatory Action Research, Apex Press (1991); Mary Louise Frampton, "Community University Research And Action For Justice (CURAJ): A Paradigm Shift for Research in California's San Joaquin Valley." Environmental Justice 2013, in press.

researcher and impacted community. Community members can inform the researcher about real-time developments on the ground that may affect the study. Researchers can inform community members of preliminary results, other relevant studies, and comparative cases that local leaders could use for their strategic decisions. Several organizations have formalized these partnerships, while many other approaches remain informal.¹⁸

Fourth, the research project and final product inform action for positive social change.¹⁹ CBPAR projects should produce results that help communities decide how to act on the problems they are confronting. It is important to emphasize that CBPAR does not look to provide "ammunition" to community partners. Just like any research, the integrity of the process remains significant, and communities must come to the table with the understanding that design impacts the validity of a project's findings. Regardless of whether research results contextualize, affirm or refute suspicions of environmental harm, the research process should contribute to building local capacity and informing community-based campaigns.

Researchers must communicate effectively at the end of the formal analysis to meet this final principle. While most academics view publishing as the end point of a research project, CBPAR researchers must take several critical steps beyond publication. For example, researchers might conduct workshops in which stakeholders and community members debate and interpret preliminary results, a process that requires results to be accessible. Without this final step, research remains removed from the issues it seeks to address.

Fifth, successful CBPAR projects bring together crossdisciplinary teams of stakeholders that can take a comprehensive approach to complex problems. Scholarship typically develops in discipline-based silos that do not reflect the multidisciplinary problems facing communities. Because CBPAR starts with a community's perspective, it lends itself to developing a body of research that is problembased, not discipline driven. For instance, while a desk-based spatial analysis could identify the uneven distribution of critical health impacts among low-income communities, the research findings alone may not provide communities with actionable information. When public health researchers join forces with social scientist, lawyers, policymakers, and city planners, projects are more likely to yield results that organized communities can use to make proposals for change.

Last, each project develops deep knowledge as long-term relationships form. These personal relationships, people

embedded in their respective places, are the social ties that can contribute to rethinking university-community relationships through CBPAR. Instead of piecemeal collaboration that responds only to an immediate need, researchers and community actors develop an ongoing relationship that increases in value over time. Each participant builds an understanding of the others' needs, capacity, and methods. Communities educate researchers about priorities and demands on the ground.

In practice, most CBPAR and CBPR collaborations do not live up to all the ideals embodied in these principles. As discussed in the Balazs and Morello-Frosch article, there is a spectrum of community engagement that informs the levels at which researchers and community members engage in a collaborative CBPR process. Across this spectrum, collaboration must consciously account for equity and inclusion. While community partners and researchers alike may opt for a more limited community role because of capacity constraints, researchers play a critical role in building the community's ability to drive research. Over time, the trust and ability of each party to work in partnership expands, and as a result, the process and product improve. When researchers drive a process that only represents their interests and perspective, they violate the integrity of PAR. When community members and researchers partner to make decisions and move towards parity in their exercise of power, the PAR collaboration remains alive.

III. COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH AND THE PRINCIPLES OF ENVIRONMENTAL JUSTICE

Community agency is a key element of environmental justice, which demands that the people impacted by environmental decisions speak for themselves.²⁰ However, even as environmental justice is slowly integrated into governmental processes,²¹ the terms and measures of participation often remain undefined.

Increasingly, EJ activists demand a commitment to CBPAR principles when they directly engage with the academy.²² As the first two principles in Table 1 show,

¹⁸This method of formalization can be seen as researchers and grassroots organizations work to establish best practices for partnership. Beverly Becenti-Pigman, Kalvin White, et al., "Research Policies, Processes, and Protocol: The Navajo Nation Human Research Review Board," in Minkler and Wallerstein (eds.), *Community-Based Participatory Research for Health: From Process to Outcomes* (2d ed., 2008); Peggy M. Shepard (West Harlem Environmental Action), *Developing an Effective Community Ethical Review Model*. ¹⁹D. Selener, *Participatory action research and social change*,

¹⁹D. Selener, *Participatory action research and social change*, Ithaca, NY: Cornell University Press (1997).

²⁰First National People of Color Environmental Leadership Summit, *supra* note 1.

²¹William J. Clinton, Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 11, 1994), *available at* <http:// www.epa.gov/region2/ej/exec_order_12898.pdf>. In response to a directive from President Barack Obama, agency leaders from the Intergovernmental Working Group on Environmental Justice recommitted to integrating environmental justice into their programs. Memorandum of Understanding on Environmental Justice and Executive Order 12898 (Aug. 4, 2011), *available at* <http://www.justice.gov/crt/about/cor/TitleVI/080411_EJ_ MOU_EO_12898.pdf>.

²²For discussion of CBPR in the context of environmental justice, *see* Meredith Minkler et al., "Promoting Environmental Justice Through Community-based Participatory Research: The Role of Community and Partnership Capacity," *Health Education Behavior* 119–137 (2008); Meredith Minkler et al., "Si Se Puede! Using Participatory Research to Promote Environmental Justice in a Mixed Use Latino Community in San Diego, California," 87 Journal of Urban Health 796 (2010).

CBPAR Principles	EJ Principles
CBPAR foregrounds empowerment; community partners help define the research agenda	Environmental justice affirms the fundamental right to political, economic, cultural, and environmental self-determination of all peoples.
CBPAR collaborations engage community members in conducting research and listens to a diversity of voices to democratize the research and social change processes.	Environmental justice demands the right to participate as equal partners at every level of decision-making.
CBPAR relationships are rooted in trust and mutual accountability.	Environmental justice demands that public policy be based on mutual respect and justice for all peoples
CBPAR processes deepen as long-term relationships are formed.	Environmental justice calls for the education of present and future generations, which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.

TABLE 1. COMPARISON OF SELECTED CBPAR AND ENVIRONMENTAL JUSTICE PRINCIPLES

empowerment and democracy are core bridging principles between CBPAR as a method and EJ as a movement. The EJ movement seeks to play a proactive role in the definitional process that comes through research. CBPAR starts with subject-to-subject mutually accountable partnership and works to democratize knowledge production. As Bill Gallegos, Executive Director of Communities for a Better Environment, stated,

at the heart of every social justice movement is the question of democracy . . . whether it's for civil rights or it's for housing or it's for living wages—the people who are impacted by the decisions that are being made need to have a decisive voice in those decisions.²³

IV. LAWYERING, COMMUNITY-BASED PARTICIPATORY ACTION RESEARCH, AND ENVIRONMENTAL JUSTICE

Lawyers and legal academics can bring unique skills and perspectives to CBPAR collaborations. Legal practice traditionally begins with a client who has presented a concrete problem to resolve and views about the outcomes they desire. In some cases, the analysis and results are exclusively legal in nature. Yet good lawyering requires engaging clients in the decision-making process and ensuring that they are fully informed and involved in major decisions throughout representation. For competent attorneys, clients are not "subjects"; they are partners who bring special knowledge and expertise to the relationship.

In an ever-increasing number of cases, lawyers develop strategies that draw on other disciplines to address their clients' problems. These strategies may include direct action, legislative and policy advocacy, or the use of specialized evidence for expert testimony in court. In social and environmental justice contexts, attorneys often invoke the principles of community lawyering to work closely with residents, community organizers, and technical experts to develop resources and determine the appropriate courses of action.

In the community lawyering paradigm, the attorney's focus goes beyond an individual's discrete problem (e.g., eviction) to consider the underlying justice issue that affects a larger community (e.g., exploitative rental practices). The lawyer's attention may initially be drawn to the larger issue by a series of individual complaints. While addressing these complaints is important, community lawyers recognize that resolving each individual complaint will not solve a larger community justice problem. In this model, the attorney is tasked with analyzing the issue from a multitude of perspectives and with marshaling all the tools necessary to solve the problem. In this process of identifying a problem, forming a strategy, and conducting analysis, client communities have a significant voice and often bring specialized expertise that an attorney lacks. In most cases brought under this model, the legal outcome is only one of a number of results that a community desires. Even when the objective is a favorable decision in court or a policy change in the legislature, the means of achieving that result are not limited to the law. Successful campaigns require research, education, media, community organizing, and other efforts driven by non-lawyers. These vehicles may include participatory action research projects.

For lawyers and legal academics who practice community lawyering, the principles of CBPAR and engagement with communities as equal partners feels natural. By collaborating with social and hard scientists who are steeped in a concrete methodology, lawyers may be able to support a CBPAR effort that is not only rigorous and robust, but true to the basic tenets of CBPAR.

V. CHALLENGES AND INNOVATIONS: ARTICLES IN THE SPECIAL SECTION

While significant CBPAR research has addressed environmental justice, little has been done within the academy to systematically examine or support the connections between

²³Bill Gallegos, "Blowing It Up: Expanding the Reach of the Environmental Justice Movement," Remarks delivered at the *Empowered Partnerships Conference*, UC Berkeley, Oct. 15, 2010.

INTRODUCTION TO EMPOWERED PARTNERSHIPS

CBPAR and EJ. Empowered Partnerships attempted to challenge the research strategies of universities by showcasing successful alternatives.

In the articles that follow here and in the next issue, leading advocates and scholars explore how CBPAR can advance the goals of EJ. The articles illustrate how the principles of CBPAR and the EJ movement map onto one another. The authors give examples of innovative projects and discuss the challenges and promising results.

If done carefully and effectively, multidisciplinary CBPAR collaborations can transform the role of the university while amplifying the outcomes of social justice efforts. At the *Empowered Partnership* symposium, Malo Hutson described his experiences as a doctoral student, and later an assistant professor, attempting to find supportive communities within public and private universities. Universities typically stake out a position of "academic neutrality," withdrawing research resources from the communities that host them. Simultaneously, they have intervened significantly in local politics and economies, often playing a disruptive or contentious role in communities.

Hutson examines the power inequalities between the academy and the public, as well as within the academy itself in "Where is the 'Public' in Public Universities?" With a focus on public universities, he offers recommendations for utilizing CBPAR to build effective, servicedriven partnerships. These partnerships are not without their challenges: the democratic process is both messy and promising.

During the symposium Rachel Morello-Frosch explained how the use of community-based participatory research (CBPR) improves the quality of the science and has contributed to developing the cumulative environmental impact assessments that increasingly represent the cutting edge of environmental justice research. In this issue, Carolina Balazs and Morello-Frosch develop these comments into a contribution that moves our attention towards the proposition that CBPR improves scientific rigor, relevance and reach, generating important, and often overlooked, benefits for the scientific enterprise.

This argument is developed through a comparative analysis of the Northern California Household Exposure Study and the San Joaquin Valley Drinking Water Study. The first studies household exposure to contaminants in fence-lined communities in Richmond, California, and the second measures disproportionate exposure to contaminated drinking water in California's San Joaquin Valley. Each study illustrates how community engagement improved the accuracy and impact of the research.

Similarly, Meredith Minkler reviewed a classic example of the power of CBPAR relationships. The West Harlem Environmental Action's famous 1997 air pollution study, which measured the issues residents had addressed as their most significant local concerns:

It starts with groups like West Harlem Environmental Action that say, "Hey, wait a minute. We've got seven out of the eight diesel bus depots serving all of New York City right here, and we've got one of the highest asthma rates in the country. What is going on?" [...] [C]ommunities figure out what [methods] are going to work for really getting the kind of data that we need? And it might be having kids in Harlem wear backpack air monitors and do pedestrian and traffic counts for five eight-hour days. [...] Those kids did a study . . . with epidemiologists at Columbia, [and] all these years later that study is still cited by EPA . . . I talked to a number of policy leaders at EPA and in New York, and they all pointed to that study and said, "This is what helped us get cleaner air standards." . . . The guy at EPA said . . . [because of] WEACT's pushing . . . we now have permanent community-based air monitors not only in Harlem but throughout the United States.

One of the many engaging articles in this issue emerged from the Minkler research group. Led by Analilia Garcia and a team of coauthors, including Wallerstein, Hricko, Marquez, Logan, Nicholas, and Minkler, this article highlights both the research process and the scientific findings of an environmental justice collaborative that addressed issues of Trade, Health and Environment, as (THE) Impact Project. The research addresses the issue of goods movement in California, which has often proved detrimental to the health and well-being of the predominantly low income and minority residents living close to the marine ports, rail yards, and connecting highways. Findings suggest it is responsible for an estimated 2,400 premature deaths and 62,000 cases of asthma annually. In this multilayered case study, the authors discuss the passage of the San Pedro Bay Ports Clean Air Action Plan in 2006, the integration of health language in official port and transportation documents, and the delaying of a major freeway so that health considerations could be more fully integrated into the planning and decision.

As a commentator, Cecil Corbin-Mark reminded us at the symposium that these "partnerships need to recognize that by their very construct, they are challenging power. They are challenging power that is entrenched." Catalina Garzón, Bria Beveridge, Margaret Gordon, Cassandra Martin, Eval Matalon, and Eli Moore address this disruption of power in their article, "Power and the Process of Participatory Research: Critical Reflections on Forging and Sustaining Em(power)ed Partnerships for Environmental Justice in West Oakland, California." Utilizing a case study of a long-term partnership between a research institute and a community-based organization, the authors unpack the various dynamics that converge at the interface of social identity, privilege (both earned and unearned) and power that emerge in the course of multiple interactions in different contexts as this action research partnership for environmental justice developed.

As dynamic, exciting, and urgent as these partnerships are, they are also hard work. In their article on the creation and growth of an EJ-informed CBPAR partnership in California's Central Valley, Mary Louise Frampton, Isao Fujimoto, Jonathan London, and Robin DeLugan recount the difficult and often tedious process of creating meaningful collaborations. Even though all parties to the partnership agreed that they wanted to establish a CBPAR collaboration, it took years before the initiative, entitled Community-University Research and Action for Justice (CURAJ), could flourish. As Frampton explains, this was a partnership where "many of CURAJ's founding academic members had themselves been community activists." Frampton notes that "[w]ithout exception, people expressed the need for Valley activists to have access to academics to articulate their research needs, to work with scholars in formulating research, and to be part of a network of academics and activists committed to social justice." While participants identified their needs and expressed the desire to move forward, the process was unfamiliar and exceptionally challenging. However, through an emphasis on creating a meaningful and equitable process, participants were still able to create trust. This account offers an account for beginning CBPAR projects and understanding how to apply its principles to develop strong collaborations.

Reviews of two recently published books complete the special section. In this issue, Scott Williams and Darren Modzelewski review Beth Rose Middleton's first book on how tribal nations are using land trusts to reclaim lost land and secure cultural and conservation easements. In the next issue, Carol Thompson offers an insightful review of Bob Gottleib and Anupama Joshi's influential book *Food Justice*, which studies the history, synergies, tensions, and possibilities for a more transformational change at the critical intersection of environmental justice and food justice social movements.

The breadth and scope of the articles will illuminate many of the challenges of, and opportunities for, CBPAR/ EJ partnerships. We hope these contributions will enrich partnerships and inform academic support for these efforts for the future.

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AUTHOR DISCLOSURE STATEMENT

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