

Introduction

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This book is about why and how professional and academic researchers contribute to environmental justice by collaborating with community partners to conduct research. While many kinds of research can make useful contributions to environmental justice (EJ), we argue that community-engaged research (CER) is necessary to advance justice through the research process, not only through its outcomes. EJ is best served when communities exercise power to produce and control their own knowledge to inform and influence decisions affecting residents. Unlike conventional research conducted *on* communities, engaged research conducted *with* communities centers local knowledge, inquiry, and experience at each stage—from designing the agenda to gathering and analyzing data to disseminating results and implementing action in response. This research facilitates and elevates truths situated in community knowledges and perspectives, and builds evidence of that truth from the ground up. This approach shifts researchers' role from extracting data and resources from communities to co-constructing knowledge and sharing research resources with community partners. Thus, the means and ends of CER fulfill EJ by valuing and centering community knowledge, building community and movement capacities to generate new understandings, producing actionable data that can influence decisions, and transforming relationships between researchers and communities to be more equitable, respectful, and mutually beneficial.

People in a wide range of fields and institutions can practice CER for EJ. They collaborate using many approaches described in this book, including participatory action research, community-based participatory research, citizen science and community science, Indigenous-led and decolonial research, and more. CER extends beyond academic scholarship to encompass many other kinds of research that can be expressed in myriad genres, from the gray literature to white papers to blueprints, from policies to posters to plays, from maps to marketing campaigns,

and much more. The EJ movement has inspired many partnerships among academics and other professional researchers, students, community organizers and policy advocates, government staff and officials, members of religious organizations, development and conservation workers, educators, engineers, designers, artists, and others.

While building research partnerships with communities is the subject of several excellent books, many of them are specific to a particular discipline or CER approach, or include EJ as one of many issues. Drawing on the academic and professional literature of many fields, this book offers a critical synthesis of a wide swathe of engaged research on EJ, describes the major research methods used, suggests agendas for future research, outlines the main steps for conducting engaged research projects, and addresses overcoming institutional barriers to this kind of scholarship in academia. Throughout the book, we employ an original framework that shows how EJ and CER address common dimensions of justice and that links research on the many topics treated in the chapters. We illustrate this discussion with multiple examples and case studies—involving either outside researchers collaborating with EJ organizations or these organizations conducting research on their own. We intend to provide promising concepts, practices, and examples for improving the theory and practice of CER for EJ, not to speak on behalf of the organizations involved in these research projects, or to derive a narrow set of best practices and imply that they can be mechanically replicated elsewhere. While the book is aimed at researchers and students, we point them toward briefer guides and trainings to share with community partners, which are designed to address their needs and perspectives in CER.

The CER approach suggests that anyone can contribute to research if properly trained, but that none of us can produce it alone. It recognizes that knowledge is situated in our individual perspectives and experience, and also produced through our relations with others. Both insights motivated us to start this book project and guided our choices about who to involve in writing it. As we conceived the book, we realized that the principles of CER and EJ, and the dynamism of the field, demanded additional perspectives beyond our own, and more collective authorship, and we therefore sought out co-authors for most chapters. After identifying the chapter topics, we recruited researchers with disciplinary expertise that complemented our own, all of whom were early-career scholars who were Black, Indigenous, or people of color, and who had published work that used or drew on CER to help build the future of EJ research in their fields. We co-developed detailed chapter outlines together and invited our co-authors to serve as lead authors, who developed the arguments and drafted the majority of each chapter, then edited collaboratively to strengthen each other's work and give the book a consistent structure and shared focus. Our collaborators' insights and experiences of CER and EJ produced a far richer and more expansive book than we could have written alone.

STRUCTURE OF THE BOOK

Part 1 establishes the foundations for the book by defining and describing the development of EJ and CER, showing why they are especially well suited to each other and offering a current summary of the major literature on both topics. Chapters trace the expanding definitions, movements, and body of research for EJ in the U.S. and globally since the 1980s, as well as the development of CER and how a CER paradigm can increase the reach, rigor, relevance, and reflexivity of EJ research. We conclude by introducing the unifying framework used throughout the book, focused on how researcher-community collaborations can advance four dimensions of justice common to CER and EJ.

Part 2 addresses how community-engaged researchers co-construct knowledge about EJ with community partners. Chapter 3 summarizes the preparatory work and self-analysis that outside researchers must do before partnering with EJ communities to address power imbalances and bridge differences. Chapter 4 describes how researchers and community partners address power relations in each of the major stages and elements of CER, from sharing funding to co-disseminating findings and taking actions. Chapter 5 addresses the barriers to conducting this kind of research within higher education—related to control of funding and data, research ethics and evaluation, and recognition of community and Indigenous knowledge and interests—and how these barriers might be dismantled through restorative justice.

Part 3 explores the ways that community-based research has been applied to EJ across disciplines. This part begins with a chapter summarizing the range of research methods and methodologies most often employed in CER for EJ. Subsequent chapters explore how this research has contributed to EJ in law, policy, regulation, and public participation; community economic development; public health; food justice and food sovereignty; urban and regional planning; and conservation and restoration. Each chapter presents an overview of CER in this domain, some exemplary case studies, and some directions for future research.

These chapters are organized according to the kinds of work that EJ organizations and their research collaborators seek to inform and influence, such as influencing policies, strengthening local economies, and planning cities. Although some of these applications overlap with academic fields, the chapters are not primarily organized to present each discipline's contributions to the topic, or around specific environmental media (water, air, land) or environmental threats (such as hazardous waste sites, individual chemicals, and so on). While valuable, these ways of defining research foci are more aligned with specialized academic training and priorities than with how communities experience EJ issues as a collection of cumulative and historical harms that are environmental, social, and economic in origin. Similarly, CER typically prioritizes practical and holistic goals to improve communities and build their power, not simply aiming to build disciplinary

understanding, advance basic research on the health effects of individual substances, or even improve applied knowledge of how to protect air or water quality in general. EJ and CER goals typically demand research that crosses disciplinary lines, for example to support a community to organize, conduct toxicological and epidemiological studies, bring litigation, and promote policy change.

Our focus on the nexus of CER for EJ means that some important or emerging EJ issues and events are treated briefly or not at all because CER has not yet played a role in them. For example, CER did not contribute significantly to protests against the Dakota Access Pipeline led by the Standing Rock Sioux tribe beginning in 2016, which galvanized global attention to EJ and Indigenous resistance to extractive industries. Conversely, we do not discuss many trailblazing CER studies that do not explore issues of EJ. In addition, while we cite many examples of the growing research on EJ around the world, our and our co-authors' understanding of the topic and selection of cases are shaped mainly by the U.S. experience and by literature published in English. Nonetheless, we hope the book will be valuable to readers elsewhere, and we look forward to learning more from them about how CER can advance EJ around the world.

TERMINOLOGY AND TONE

Because there are many terms used to describe the key concepts mentioned in this book, we chose terminology by considering current and historical meanings. For example, *environmental justice* emerged from the social movement and research in the U.S. that started in the 1980s, in part to link *environmental racism* to additional axes of environmental oppression, such as class, Indigeneity, and gender. In chapter 1, we discuss some of the many other names used to describe elements of EJ around the world to connect these important movements and ideas across borders.

We use *community-engaged research* as an umbrella term for many kinds of research approaches—participatory action research, community-based participatory research, citizen and community science, and others—which have converged in some ways but retain significant differences. Rather than attempting to impose single definitions of other significant terms that have been defined differently, such as *decolonizing knowledge*, we try to provide brief definitions when they are used initially in the context of each chapter.

Terminology for race, ethnicity, and Indigeneity continues to evolve rapidly and consensus is elusive. Throughout, we and our co-authors aim to use terms appropriate to context and used by movement participants themselves today, while recognizing that no term is universally embraced. We name groups in the most specific terms that fit the context: Standing Rock Sioux, youth residents of the East Yards, and so on. When discussing the U.S., we sometimes refer collectively to Black, Indigenous, and people of color (BIPOC) to reflect their similar positioning and frequent solidarity in EJ movements, as well as their distinct identities.

We recognize that language is historically contextual and use the specific terminology used by authors in their earlier works. However, referring only to BIPOC can slight the important, distinctive, and place-based environmental injustices faced by communities of many other races and ethnicities, such as Latinx, Chicx, Asian, Pacific Islanders, white working-class people, and the hundreds of Indigenous nations and tribes in the U.S. In some cases, we refer collectively to people who face such inequities by the terms *environmental justice communities* or *frontline and fenceline communities*.

Few collective terms for race and ethnicity used in the U.S. describe people struggling against environmental injustices outside the U.S. precisely or adequately, or are recognized by people in those communities. When we cannot be more specific, we sometimes refer to them as residents of the Global South. When discussing Indigenous nations or tribes in CER, we typically adopt the terms they use in their published research. Elsewhere, we try to use specific tribal names when they describe the community relevant to the study, broader regional names for referring to larger collectivities (such as *Native American* or *American Indian*), and *Indigenous peoples* for the highest level of generality about peoples original to their places who face similar struggles for recognition from states (following Gilio-Whitaker 2019).

We recognize that gender and other aspects of identity are often defined at the individual and personal level with terms used by different people in different ways for different purposes and allow for different expressions throughout the book. These identities are important sites of solidarity and social movements that are defined, negotiated, and assumed through discussion and action. We embrace principles of CER that require honest recognition of privilege and power in relationships, and therefore aim to recognize communities' collective self-naming as an important act of empowerment (Kirk and Okazawa-Rey 2019).

Another important challenge of writing about EJ is to find a balance between evoking appropriate outrage and inspiring careful analysis (Lockie 2018). Writing the book during the COVID-19 pandemic and during the widespread reckoning with anti-Black police violence in the U.S. was a constant reminder of how environmental injustices wreak violence on people's bodies, minds, and communities. Environmental contaminants kill fetuses and cause birth defects, cut down young people exposed to toxics in the workplace, and cause or worsen diseases that immiserate and shorten lives. Seizure and contamination of lands displace and destroy communities and cultures. These harms, and the consciousness of them, heap additional trauma on individuals and communities coping with racism, exploitation, colonialism, patriarchy, and other oppressions. Institutions that perpetrate this violence do not simply do so unintentionally or from ignorance, but often consciously designate some communities as sacrifice zones to amass wealth, accrue power, and protect environmentally privileged people from facing the same harms. The fact that much of this is "slow violence" (Nixon 2011),

unfolding over years or centuries, makes it even more important to make this violence manifest in scholarly writing.

At the same time, EJ research needs to offer a clear-eyed analysis of the causes, consequences, and potential remedies for environmental injustices. Therefore, we and our co-authors discuss examples of environmental harms as precisely as possible, clarifying who is affected by them and how, and consider potential strategies and solutions critically. We also aim to address multiple kinds and degrees of community involvement in research, rather than dismissing some kinds of CER as irredeemably extractive or authoritarian. We take inspiration from movements and researchers pursuing justice by questioning, and engaging in dialogue about, these matters, which can extend to seemingly small decisions about how to write. For example, while there are some scholars who find it inherently trivializing to abbreviate *environmental justice* as *EJ*, we are less troubled by doing so. Like the choice of terms for racial and ethnic groups, we think that what is written *about* and *around* these terms makes the most significant contribution to illuminating EJ and stoking the fires of change to enact it.