



Routledge Advances in Climate Change Research

REGENERATIVE URBAN DEVELOPMENT, CLIMATE CHANGE AND THE COMMON GOOD

Edited by

Beth Schaefer Caniglia, Beatrice Frank,
John L. Knott Jr., Kenneth S. Sagendorf and
Eugene A. Wilkerson



Regenerative Urban Development, Climate Change and the Common Good

This volume focuses on the theory and practice of the regenerative development paradigm that is rapidly displacing sustainability as the most fertile ground for climate change adaptation research.

This book brings together key thinkers in this field to develop a meaningful synthesis between the existing practice of regenerative development and the input of scholars in the social sciences. It begins by providing an expert introduction to the history, principles, and practices of regenerative development before going on to present a thorough theoretical examination by known theorists from disciplines including sociology, geography, and ethics. A section on regenerative development practices illustrates the need to significantly advance our understanding of how urbanization, climate change, and inequality interact at every scale of development work. Finally, the book ends with a serious consideration of the ways in which integrated systems thinking in higher education could result in a curriculum for the next generation of regenerative development professionals.

Regenerative Urban Development, Climate Change and the Common Good will be of great interest to students, scholars, and practitioners of regenerative development, climate change, urban planning, and public policy.

Beth Schaefer Caniglia is Editor-in-Chief of *The Solutions Journal*, where she amplifies the voices of dreamers, innovators, change-makers, and risk-takers in service to building an equitable and sustainable world.

Beatrice Frank is the Social Science Specialist for the Capital Regional District Regional Parks and an adjunct professor at the University of Victoria, Canada. As a social scientist, she focuses on engaging people in decision-making around natural resources management and conservation. She has been engaged in discussion around climate change, sustainability, and environmental justice over the last decade, which has flourished in her contribution on regenerative development discourses.

John L. Knott, Jr., a third generation master builder/developer with over 50 years of experience, is an internationally recognized leader in green building,

sustainable development, and urban regeneration. He is the creator and Founder of CityCraft®. Knott is recognized as an influential thought leader in molding the nation's sustainable development movement. He has served as an advisor to Department of Housing and Urban Development (HUD), Department of Energy (DOE), Environmental Protection Agency (EPA), and the National Park Service throughout his career, also serving as Chairman of the US Working Group for Urban-Suburban Indicators in compiling the landmark Heinz Center report, The State of the Nation's Ecosystems.

Kenneth S. Sagendorf is the Founding Director of the Innovation Center and Professor in the Anderson College of Business at Regis University. Working in a college focused on stewardship, he built the Innovation Center to challenge the status quo of business education to focus on creative and systems thinking and love and heroism. He deeply believes in the power of education to create the humans and the humanity needed for our future.

Eugene A. Wilkerson spent 15 years in the private sector working primarily in Human Resources and Education and Training. In 2008, his passion for learning led him to pursue PhD in Educational Leadership. Wilkerson is currently an Assistant Professor at Regis University and Assistant Dean, Anderson College of Business.

Routledge Advances in Climate Change Research

Contemplating Climate Change

Mental Models and Human Reasoning

Stephen M. Dark

Climate Change, Moral Panics and Civilization

Amanda Rohloff

Edited by André Saramago

Climate Change and Social Inequality

The Health and Social Costs of Global Warming

Merrill Singer

Cities Leading Climate Action

Urban Policy and Planning

Sabrina Dekker

Culture, Space and Climate Change

Vulnerability and Resilience in European Coastal Areas

Thorsten Heimann

Communication Strategies for Engaging Climate Skeptics

Religion and the Environment

Emma Frances Bloomfield

Regenerative Urban Development, Climate Change and the Common Good

Edited by Beth Schaefer Caniglia, Beatrice Frank, John L. Knott Jr., Kenneth S.

Sagendorf, Eugene A. Wilkerson

For more information about this series, please visit: <https://www.routledge.com/Routledge-Advances-in-Climate-Change-Research/book-series/RACCR>



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

Regenerative Urban Development, Climate Change and the Common Good

Edited by Beth Schaefer Caniglia,
Beatrice Frank, John L. Knott, Jr.,
Kenneth S. Sagendorf, and
Eugene A. Wilkerson

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

earthscan
from Routledge

First published 2020
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
52 Vanderbilt Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2020 selection and editorial matter Beth Schaefer Caniglia, Beatrice Frank, John L. Knott Jr., Kenneth S. Sagendorf and Eugene A. Wilkerson; individual chapters, the contributors

The right of Beth Schaefer Caniglia, Beatrice Frank, John L. Knott Jr., Kenneth S. Sagendorf and Eugene A. Wilkerson to be identified as the authors of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

A catalog record has been requested for this book

ISBN: 978-1-138-55692-8 (hbk)

ISBN: 978-1-315-15050-5 (ebk)

Typeset in Goudy
by Cenveo® Publisher Services

Contents

| | |
|--|-----------|
| <i>List of figures</i> | ix |
| <i>List of tables</i> | xi |
| <i>List of contributors</i> | xii |
| <i>Foreword by Tim Keane</i> | xiv |
| | |
| 1 Regenerative development: Urbanization, climate change, and the common good | 1 |
| BETH SCHAEFER CANIGLIA, BEATRICE FRANK, JOHN L. KNOTT JR., KENNETH S. SAGENDORF AND EUGENE A. WILKERSON | |
| | |
| 2 The regenerative paradigm: Discerning how we make sense of the world | 13 |
| CAROL SANFORD | |
| | |
| 3 The centrality of the systems approach: Regenerative development, resilience, and sustainability | 34 |
| BETH SCHAEFER CANIGLIA | |
| | |
| 4 Toward a regenerative psychology of place | 49 |
| NICHOLAS S. MANG | |
| | |
| 5 Regenerative development and environmental justice | 77 |
| DAVID N. FELLOW | |
| | |
| 6 Governing regenerative development | 93 |
| THOMAS DIETZ | |

| | | |
|-----------|--|------------|
| 7 | Regenerative development and environmental ethics: Healing the mismatch between culture and the environment in the third millennium | 115 |
| | THOMAS J. BURNS, TOM W. BOYD, AND CARRIE M. LESLIE | |
| 8 | Regenerative economics | 136 |
| | L. HUNTER LOVINS | |
| 9 | CityCrafting: Evolution of regenerative development and regenerative development in practice | 156 |
| | JOHN L. KNOTT, JR. | |
| 10 | Rethinking memorial public spaces as regenerative through a dynamic landscape assessment plan approach | 187 |
| | REBECCA SHEEHAN | |
| 11 | Integrating social science and positive psychology into regenerative development and design processes | 204 |
| | JENNIFER EILEEN CROSS AND JOSETTE M. PLAUT | |
| 12 | Workforce development: A regenerative perspective | 226 |
| | EUGENE A. WILKERSON AND ALLISON DAKE | |
| 13 | Education for regeneration | 240 |
| | KENNETH S. SAGENDORF AND BARBARA J. JACKSON | |
| 14 | Conclusion | 261 |
| | BETH SCHAEFER CANIGLIA, JOHN L. KNOTT, JR., AND BEATRICE FRANK | |
| | <i>Index</i> | 274 |

Figures

| | | |
|------|---|-----|
| 2.1 | The four modern paradigms framework | 16 |
| 2.2 | The Seven First Principles of Regeneration at work | 32 |
| 3.1 | The eight principles of a regenerative economy taken from John Fullerton Capital Institute (2015) | 40 |
| 3.2 | Conceptual comparison of sustainability, resilience, and regeneration | 44 |
| 4.1 | Regenerative psychology as a nested holarchy (Mang 2009) | 51 |
| 4.2 | Psychologies of adjustment (Mang 2009) | 52 |
| 4.3 | Psychologies of human potential (Mang 2009) | 55 |
| 4.4 | Psychologies of living systems (Mang 2009) | 61 |
| 4.5 | Psychologies of spiritualization (Mang 2009) | 64 |
| 4.6 | Psychology for regenerative development framework | 67 |
| 6.1 | Schematic of a linked process of analysis and deliberation | 99 |
| 8.1 | Ramp to a finer future, graph from the Capital Institute | 141 |
| 9.1 | Noisette Community Master Plan 2003 | 157 |
| 9.2 | Deweese Island aerial | 168 |
| 9.3 | Noisette Company presentations | 172 |
| 9.4 | Noisette Rose—Noisette Community Master Plan 2003 | 173 |
| 9.5 | Noisette Foundation now CityCraft® Foundation presentations | 174 |
| 9.6 | North Charleston Riverfront Park—Noisette Company | 174 |
| 9.7 | West Denver CityCraft® reports | 176 |
| 9.8 | Major influence on West Denver neighborhoods—CityCraft® West Denver reports | 177 |
| 9.9 | West Denver demographics—CityCraft® West Denver reports | 177 |
| 9.10 | Critical issues summary facing West Denver—CityCraft® reports | 178 |
| 9.11 | West Denver Assets—CityCraft® reports. | 179 |
| 9.12 | Integration example—CityCraft® reports | 180 |
| 9.13 | Critical issues transformed to integration opportunities—CityCraft® reports | 181 |
| 9.14 | CityCraft® Integrated Research Center presentation—CityCraft® Foundation | 182 |
| 9.15 | CityCraft® Foundation 2018 | 184 |

x *Figures*

| | | |
|------|---|-----|
| 11.1 | Regenerative practitioner framework | 209 |
| 11.2 | Social network structures (Krebs & Holley 2005) | 214 |
| 13.1 | The growth from sustainability to regeneration in both design (figure on the left) and design thinking (figure on the right). Both figures reprinted from Guzowski (2011) and used with permission from Bill Reed (as adopted by Doug Pierce) (left) and Doug Pierce (right). | 246 |
| 13.2 | Hauk's comparison of reclamation, resilience, and regeneration, outlining the skills needed in each area. Table used with permission. | 247 |
| 13.3 | Integrative learning concept map. | 249 |

Tables

| | | |
|------|--|-----|
| 3.1 | Basic components of systems thinking | 42 |
| 6.1 | Diagnostic questions to assess challenges to deliberative governance | 100 |
| 6.2 | Design principles for governing regenerative development | 101 |
| 11.1 | Definition of key terms for regenerative development discourses | 205 |
| 11.2 | Facilitation practices to evolve a network | 216 |
| 13.1 | Comparison of the approaches/areas of study used by the UnSchool for Disruptive Design and the CityCraft method as foundations for understanding systems thinking in regenerative development | 253 |

Contributors

Tom W. Boyd, David Ross Boyd Professor Emeritus of Philosophy and Religious Studies, University of Oklahoma

Thomas J. Burns, Professor of Sociology, University of Oklahoma

Beth Schaefer Caniglia, Editor-in-Chief, *The Solutions Journal*

Jennifer Eileen Cross, Associate Professor in the Department of Sociology, Institute for the Built Environment, Colorado State University

Allison Dake, Affiliate Professor College of Business and Economics, Regis University

Thomas Dietz, Professor of Sociology and Environmental Science and Policy, Michigan State University

Beatrice Frank, Social Science Specialist, Capital Regional District of Victoria & Adjunct Professor, School of Environmental Studies, University of Victoria, Canada

Barbara J. Jackson, Director, Franklin L. Burns School of Real Estate and Construction Management, University of Denver

John L. Knott, Jr—CityCraft® Founder

Carrie M. Leslie, Doctoral Student in Environmental Sociology, University of Oklahoma

L. Hunter Lovins, President, Natural Capitalism Solutions

Nicholas S. Mang, Principal of Regenesys Group, Inc.

David N. Pellow, Dehlsen Chair and Professor of Environmental Studies and Director of the Global Environmental Justice Project, University of California

Josette M. Plaut, Executive Director, Institute for the Built Environment, Colorado State University

Kenneth S. Sagendorf, Professor and Director, Innovation Center, Anderson College of Business Regis University

Carol Sanford, Award-Winning Author, Contrarian Speaker, Exec. Educator

Rebecca Sheehan, Associate Professor in the Department of Geography,
Oklahoma State University

Eugene A. Wilkerson, College of Business and Economics, Regis & University
Assistant Dean, Anderson College of Business

Foreword

A quick search for all the business-related books and articles with the term “leader” or “leadership” in the title uncovers that 593,033 were written between 2006 and 2016.¹ That is more than 150 books or articles published every single day in the decade leading up to the election of Donald Trump as president of the United States.

Documented within the research, there are dozens of leadership styles described eloquently and in great detail. One would assume that the skills gleaned from the voluminous methods offered have inspired countless leaders to improve the quality of life for everyone in society. Unfortunately, business leadership’s enduring commitment to a wealth maximization economic development model created a world where 90% of the wealth is owned by less than 10% of the population.²

Despite our obsession with leadership—or more accurately, our obsession with writing about leadership—the future still seems bleak on other fronts as well. Each year we destroy our forests at a rate roughly equivalent to the size of Ireland. Accelerating deforestation is largely the result of converting forests to arable land to grow more food, yet infant mortality rates in low income countries due to poverty-related health issues is 14 times greater than that of high income countries.³ In the United States, the world’s largest exporter of agricultural products, childhood obesity rates have more than tripled since the 1970s.⁴ Business leaders have been aware of the diverging and incongruent trends, but actions to solve the problems would cost precious resources in pursuit of wealth maximization for the wealthiest.

In 2006, violence against citizens in the most volatile regions in the world led to 2,500 deaths. After a decade of prolific leadership penmanship, in 2017 those same regions killed over 44,000 citizens.⁵ Refugees fleeing violence in their home countries seek asylum in the United States, a country where guns killed nearly as many people last year as the number of deaths from the most violent regions in the world combined. Leaders in the United States have seeded gun violence through perverse interpretations of the second amendment to the point where about a third of the 320 million US citizens own nearly 400 million guns. Worse than that, every single state allows concealed carry.⁶

Current leaders have delivered the world to an important crossroads. We can continue on our current trajectory of death, destruction, and poverty, or we can

change course. Some believe the question is not which way will we turn, but is it too late to even decide? In working together to create a less dire future, it helps to reconsider time itself. The Greeks describe time with both quantitative and qualitative aspects. “Chronos” is the counting of time in a linear fashion, whereas “Kairos” considers the interactions of various forces in the world to determine the right time for certain actions.

In 2015, I brought this thinking to Regis University to become the Founding Dean of what was then called the College of Business and Economics. As the only Jesuit University in the Rocky Mountain region, I was charged with the task of leading a different business school. The 450-year plus history of the Jesuits and their role in transformational education provided guidelines for what this might look like. Our foundational value *Magis*, which translates to the more universal good, challenged us to seek for ways to accept this Kairos moment and how we would influence the world as we launched at nearly the same time of the writing of *Laudato Si*.

I choose to believe in the revolutionary idea of regenerative development. At its core regenerative development is premised on business abandoning the old models of leadership and embracing stewardship. Unlike leadership, stewardship is much more intentional. Business, the most powerful force in society, must adapt a new categorical imperative: to protect and care for society and improve the quality of life on earth. Regenerative development might just be the most important enabler of that new vision for business stewardship. It applies an intentional process that views society as a system of integrated activities, each renewing rather than depleting resources. Every aspect of regenerative development aspires to improve the quality of life for all. This is the heart of our college’s stewardship vision. With a universal commitment from business to embrace stewardship, regenerative development will be the tool that effectively changes society’s current trajectory while ensuring a thriving planet in the future.

Tim Keane, Dean of the Anderson College of Business, Regis University

Notes

1. <http://web.b.ebscohost.com/ehost>.
2. <https://inequality.org/facts/global-inequality/>.
3. http://www.who.int/gho/child_health/mortality/mortality_under_five_text/en/.
4. <https://www.cdc.gov/healthyschools/obesity/facts.htm>.
5. <http://www.aclcddata.com—including the Middle East, Africa, and Southern and Southeastern Asia>.
6. <http://www.cnn.com/2018/02/15/politics/guns-dont-know-how-many-america/index.html>.



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

1 Regenerative development: Urbanization, climate change, and the common good

*Beth Schaefer Caniglia, Beatrice Frank, John L. Knott Jr.,
Kenneth S. Sagendorf and Eugene A. Wilkerson*

Urbanization, climate change, and inequality are among the greatest challenges facing the world today. More importantly, these forces combine in ways that make addressing the impacts of one difficult without considering the others. Traditionally, the intertwined relationships among people, prosperity, and planet have been tackled through sustainability practices. However, in recent times, the most innovative responses to the integral nature of these factors have been found in the regenerative development community.

The regenerative development paradigm is catching on in cities such as Denver, Colorado; Portland, Oregon; and Pomona, California (Caniglia 2018, 2019). Small enclaves of architecture, design, and development practitioners have advocated this approach to development for decades, and the scholarly communities in these disciplines have made progress articulating the theory, principles, and practices surrounding regeneration. The theoretical underpinning of the systems approach espoused by scholars in traditional fields associated with regenerative development has been vetted by social scientists from a variety of fields such as environmental sociology, political ecology, and interdisciplinary practitioners of coupled human and natural systems (CHANS) approaches. However, the theories and practices of regenerative development have yet to be engaged in most social science disciplines. As regenerative development is grounded in a worldview where humans are deeply embedded in nature; where the emphasis is given to the complex, dynamic, and interconnected relations of all living organisms; and where change is constant and inevitable, the full potential of the regenerative approach cannot be reached until its principles, practices, and literature are fully explored by social scientists from a spectrum of disciplines (Benne & Mang 2015; Du Plessis & Brandon 2015). This book is dedicated to that effort. In this chapter, we lay out the complex ties between urbanization, climate change, and inequality; define regenerative development; and provide an overview of the book.

The intersectionality of urban problems

Cities present us with tremendous challenges and opportunities. Currently, the vast majority of citizens of industrialized nations live in or near urban centers, and by 2050, the majority of the world will be urbanized (United Nations, Department

of Economic and Social Affairs, Population Division 2018). Until recently, urbanization was a challenge most faced by industrialized nations; however, urbanization is impacting the developing world at the most rapid rate (Worldwatch Institute 2016). In the industrialized world, urbanization is characterized by challenges such as waste management, gentrification, displacement of populations of origin, and lack of affordable transportation and housing. In the developing world, the challenges can be quite different, especially when basic services are not available, the informal economy is prominent, and shanty towns are abundant. In both cases, the economies of nations are intimately tied to their cities, with the majority of production and consumption taking place in and near urban areas (Kilroy, Mukim & Negri 2015). Approximately 80% of all skilled jobs are located in cities (Talbot 2018). Relatedly, approximately 75% of all energy consumption takes place in cities, placing the role of cities in the amelioration of climate change center stage. Cities are also the most unequal places on the earth, and the larger a city grows, the larger the gap between the rich and the poor becomes (Gordon 2013).

These challenges—urbanization, climate change, and the common good—are intimately interwoven in urban systems. As populations grow, competition for housing increases, the poor are displaced at more rapid rates, and cost of living rises. The existing housing stock undergoes transformations that can be good for energy consumption, but the new homes often have larger ecological footprints overall. Public transportation often improves with urbanization, but the cost is frequently higher than what the poor and lower income families can afford; and those in the service sector are forced into communities that lie outside of public transportation zones. In order to create livable cities for all inhabitants, far more attention is needed in the intersectionality of urban socioecological problems (Caniglia, Vallee & Frank 2017).

The economies of cities are the cornerstones of national and state economies (Dobbs et al. 2011). In the industrialized world, cities house 80% of all skilled jobs (Talbot 2018). The healthcare sector is increasingly concentrated in cities, with approximately 90% of all hospitals and 65% of all specialty physicians located in urban centers. Not only is the education sector concentrated in cities, but the cost of higher education is 30–50% cheaper in urban centers (McKinsey Global Institute 2011). Not surprisingly, the rich and powerful are highly concentrated in cities (Burrows, 2018). For example, Kiplinger cites that most millionaires in the United States live in Los Angeles and New York City. Because the top 10% of all Americans own 84% of all the stock, the vast majority of economic power is concentrated in very few locations—all cities. This trend is repeated around the world (United Nations, Department of Economic and Social Affairs, Population Division 2018): Urban centers are economic, political, and population power houses.

Of course, the distribution of quality of life in the city is highly unequal. Whether we examine São Paulo, Moscow, Chicago, Nagoya, London, or Madrid, the data consistently show that cities exhibit the highest gaps between their rich and poor occupants (United Nations, Department of Economic and Social Affairs, Population Division 2018). The service economy in part structures this outcome, because the sector itself is bifurcated between highly skilled positions

and lower skilled positions—which contributes to the disappearing middle class (Burgers & Musterd 2002; Sassen 1996). There is close coupling between the concentration of economic production, consumption, banking, stocks and development, urban inequality, and the overall impact of urban development on the production of the common good. Unchecked, these forces consistently lead to the development of a growing and nearly permanent and vulnerable underclass.

The advent of climate change enhances the challenges faced by those who reside in cities, rich and poor. Cities around the world are experiencing environmental fluctuations outside of normal ranges, such as particulate matter in the air, record high and low temperatures, flooding, droughts, wildfires, and other extreme weather events. Scholars have shown that a variety of factors predict which population groups will be most impacted by these changes (Caniglia, Vallee, & Frank 2017; Frank, Delano & Caniglia 2017). All populations are exposed to more air pollution, along with more water and airborne diseases as a result of climate change. However, higher exposure to these threats increases vulnerability, suggesting that the homeless and those living without adequate shelters are particularly at risk. Farmers, herders, and those whose livelihoods depend on subsistence lifestyles are also at higher risk. Local authorities and first responders around the world are challenged to protect their communities and to enact effective measures when disasters strike. The costs of climate change for citizens, businesses, and government officials are growing incrementally and are difficult to bear.

These challenges are consistently cited as a primary reason why cities have emerged as global leaders in climate-related innovation (C40Cities). Urban greenways, public transportation, green roof initiatives, and energy-efficient buildings are just a few examples of the innovations cities are implementing to ameliorate the costs and risks of their changing climates. Furthermore, urban leaders know that they are most at risk to the impacts of climate change, because 90% of all cities are located in coastal communities (see C40Cities) making their infrastructure, economies, and citizens the most vulnerable worldwide. As a result, cities lead the way in important innovations. Significant work has been done to improve measurement of urban climate impacts, to develop adaptation frameworks, and to create increasing resilience through urban climate action plans (C40Cities; Dobbs et al. 2011; UN 2018). Cities are also leading the way in technological innovations that are central to decarbonization, including new electrical grid technologies, transportation, waste management, and building efficiencies (Caniglia 2019).

The primary difficulty cities face is how to approach the impacts of rapid urbanization, climate change, and inequality *at the same time*. Systems thinking and complex-adaptive management practices offer the most promising approach to the tapestry of interactive challenges cities now face (see [Chapter 3](#)). While many cities are systematically addressing climate risks, urbanization, affordable housing, transportation needs, etc., most are not providing integrated solutions that account for the feedback loops that intimately tie these challenges together. Moving the needle in a positive direction in one of these categories can have important negative impacts on the others. For example, transportation improvements in low-income communities make those communities more

desirable to people with higher incomes. This often causes gentrification to the extent that the residents of origin can no longer afford to remain in their homes. Similar processes take place with neighborhood greening initiatives (Gould & Lewis 2017). Providing improved access to green space in low-income communities leads to “green gentrification,” causing displacement of populations of origin. Rather opposite challenges are experienced in the urban South, where deep preferences for self-governance in informal settlements confound attempts of local authorities to provide improved housing conditions in systematic ways. Cities are making impressive improvements in managing their ecological, economic, and infrastructure capital. However, urban governance systems can only succeed in creating equitable and sustainable cities if they incorporate cultural capital into their frameworks. This is precisely the motivation for writing this book. Regenerative development offers a framework that provides a systems approach to complex-adaptive management that incorporates cultural, ecological, and economic capital with the need to preserve and improve existing infrastructure.

What is regenerative development?

Regenerative development is rapidly displacing sustainability as the most fertile ground for climate change adaptation research. The term “regeneration” is flooding the literature as a refreshing substitute for the concept of sustainability. From its original description within the broader context of sustainability, scholars and practitioners have increasingly articulated the meaning of regenerative development, providing a holistic and bio-regionally based framework that stands in contrast to the mechanistic, more static, and anthropocentric worldview embedded in current approaches to sustainable development (Zhang et al. 2015). This distinction has taken root with the changes the traditional sustainability paradigm has undergone over time and by stepping up the quality of thinking and engaging around the interactions between the human-made and the natural environment (Du Plessis & Brandon 2015). Said differently, the unique approaches to systems thinking that evolve from regenerative development contemplate feedback loops that emerge from non-environmental systems.

Research and practice have increasingly shifted toward applying holistic processes to create feedback loops between physical, natural, economic, and social capitals (Caniglia et al. 2014; Lovins et al. 2018;). This idea of focusing on the whole and on integrated complex systems has propelled the contemporary notions of sustainability forward and allowed for the development of socioecological systems and CHANS thinking (Caniglia, Vallee & Frank 2017; Frank, Delano & Caniglia 2017). This push toward “the reconnection of human aspirations and activities with the evolution of natural systems, essentially coevolution” (Mang & Reed 2012, p. 6), has advanced its full potential in the regenerative paradigm. The evolution of this new thinking affirms the idea that holistic processes and feedback loops are not only mutually supportive but also contain the capacity to restore equitable, healthy, and prosperous relationships among the different forms of capital (Caniglia 2018; Du Plessis 2012).

As nicely put by Du Plessis and Brandon (2015), regenerative development—or the regenerative sustainability paradigm—“has the potential to create a future where the damage done to the biosphere and to our social systems has been restored, and people can live in mutually supportive symbiosis with their social and biophysical environment (their whole ecological system)—the one nurturing and growing the potential of the other” (p. 56). Regenerative development is grounded in a worldview where humans are deeply embedded in nature; where the emphasis is given to the complex, dynamic, and interconnected relations of all living organisms; and where change is constant and inevitable (Benne & Mang 2015; Du Plessis & Brandon 2015).

The idea behind regenerative development is to offer an approach that fosters a strong adaptive capacity and evolutionary potential for the whole system, thus allowing for a thriving future for all through restoration, regeneration, and the commitment to creating ongoing positive impacts on the health of ecosystems and the entire biosphere (Benne & Mang 2015; Hes & Du Plessis 2015). To summarize it in a simple way, regenerative development is about humanity and its coevolutionary role with nature in building sustained social and natural capital—or to “make sustainability real” (Zhang et al. 2015, p. 2).

As with any growing, building, and evolving field of study and exploration, the terms used by different authors in this book will vary. Regenerative Development, Regenerative Design, Just Sustainability, and Regenerative Sustainability are just some of the conceptual frameworks used to describe this holistic system perspective that has attracted increased interest from different disciplines and practices (Agyeman, Bullard & Evans 2003; Zhang et al. 2015). Because of its novelty and evolving nature, regenerative development definitions, applications, and expected outcomes remain to be clearly articulated. However, most authors agree that regenerative processes have three primary goals:

- Catalyzing increased prosperity and health of human and natural environments through holistic design and meaningful community participation.
- Fostering positive feedback loops that create mutually beneficial relationships between natural, human, economic, and physical capital that self-replicate to build abundance in all four categories.
- Respecting and having a deep consideration of local contexts, whether economic, cultural, or ecological, so that development is properly adapted to the local ecosystem, cultural, and economic circumstances.

The principles of regenerative development are reflected in global institutions and evolving international environmental law. The Sustainable Development Goals (SDGs) recommend that countries prioritize ending poverty, increasing equal access to education and opportunity, building sustainable and resilient cities, and improving quality of life for all in harmony with the land, sea, and air (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>). These regenerative development principles also interlink quite closely to the

following three principles of the New Urban Agenda document adopted at the United Nations Habitat III meeting held in Quito, Ecuador, in September 2016⁴:

- **Leave no one behind:** This principle is about ending poverty in all its forms and dimensions, including the eradication of extreme poverty, ensuring equal rights and opportunities, providing socioeconomic and cultural diversity, enhancing integration in the urban space and livability, and propelling education, food security, health, and well-being forward. It includes ending the epidemics of AIDS, tuberculosis, and malaria, promoting safety and eliminating discrimination and all forms of violence. It focuses on ensuring public participation through safe and equal access for all to physical and social infrastructure, basic services, and adequate and affordable housing.
- **Sustainable and inclusive urban economies:** This principle is about leveraging the agglomeration benefits of well-planned urbanization, high productivity, competitiveness, and innovation. It aims at promoting full and productive employment and decent work for all, ensuring decent job creation and equal access for all to economic and productive resources and opportunities, and preventing land speculation. It promotes secure land tenure and the proper management of urban shrinking where appropriate.
- **Environmental sustainability:** This principle is about promoting clean energy, sustainable use of land and resources in urban development, as well as protecting ecosystems and biodiversity. The key focus of this principle is adopting a healthy lifestyle in harmony with nature and promoting sustainable consumption and production patterns. Such an approach is key to build urban resilience, reduce disaster risks, and adapt to climate change.

A multitude of concepts and approaches have been implemented to achieve sustainable urbanization as clearly highlighted in the special issue “Toward a Regenerative Sustainability Paradigm for the Built Environment: From Vision to Reality” (see <https://www.sciencedirect.com/journal/journal-of-cleaner-production/vol/109>), among others. Common traits to the range of regenerative approaches found here are to put the holistic and coevolving core ideas of regeneration into practice in cities (i.e., sustainable built environment, green technologies) and to enhance life conditions and ecosystem health at a global scale. Such a shift is not only key to building resilience and adaptive capacity toward climate change, but it is also necessary to help to shift societal worldviews toward the common good—or toward citizenship, collective action, and active participation that strives for a thriving and abundant future for all.

The book aims at offering a common platform to examine the ways the regenerative paradigm can benefit from the empirical work conducted by the former and the theoretical frameworks developed by the latter in their disciplinary domains of expertise. To move beyond some current literature that conflates regenerative development with sustainable development, the authors were provided with a standard definition of regenerative development that served as a guide for their

thinking. This a priori approach provides a sense of rigor to the process and serves as connective tissue for the different perspectives in the text.

Regenerative development is a development paradigm designed to push beyond sustainability. While sustainable development focuses on development today that protects the ability of future generations to develop, the priority of regenerative development is to apply holistic processes in a bioregional context to create feedback loops between physical, natural, economic, and social capital that are mutually supportive and contain the capacity to restore equitable, healthy, and prosperous relationships among these forms of capital.

Why this book is different

We have challenged authors, and invited the broader social science community, to interrogate their existing contributions and insights into urbanization, climate change, and the common good by using the lens of regeneration, which we believe will provide mutual benefits and advancements in practices and theories. As a construct, regenerative development's inclusion of all four types of capitals—physical, natural, economic, and social—makes it important that this book is written for a variety of audiences. As such, it only makes sense to include contributions from a multitude of perspectives. You will read chapters from traditional scholars who are turning over the truths as they currently know them to find the new truths that regenerative development births and that coupled and human natural systems need. Chapters are written by consultants who spend time encouraging others to see regenerative development as a new possibility. Experienced practitioners and applicers of regenerative development who are busy blazing new paths and partnerships share their experiences in this book, bringing the wisdom of experience and a lens where regeneration may have been an influence across previous generations. And educators who are pushing the boundaries of disciplinary and, especially, academic traditions contribute chapters examining if what we do can contribute to developing the field of professionals we need and, if not, how do we educate for a regenerative and common good-focused future. This book is intended to reach widely to those dreaming of a regenerative future.

Through this book, we hope to begin to break down some of the silos that exist, but most importantly, we seek what the Jesuits call the *Magis*—the greater good—that comes from encouraging and including broad examination and application of a topic. In each chapter you read, you will encounter work aimed at honoring the dignity of the human spirit and the earth. You will wrestle with concepts such as cultural lag and institutional mismatch as well as social and environmental vulnerability. You will consider why regenerative development stems from an understanding that one is developing an interconnected habitat and a connected and reliant set of systems, not merely structures. And we hope that you, as a reader, will clearly see how the capacity for a regenerative future can evolve beyond individual champions.

How this book is put together

The book opens with a contribution of the editors ([Chapter 1](#)) that engages with existing literature regarding sustainability, resilience, and regenerative development and highlights the centrality of systems thinking as a pathway to fruitfully combine and enhance this disciplinary approach through a more holistic and comprehensive vision. This introductory chapter is followed by [Chapter 2](#) contributed by Carol Sanford, in which she discusses the most recently emerging paradigms in regenerative development. Based on her extensive knowledge in this domain, the author explains the evolve capacity, do good, arrest disorder, and extract value paradigm and how these concepts form a way of organizing, acting, and pursuing regenerative development by generating a series of worldviews (i.e., living systems, human potential, behavioral, machine, and aristocracy). She continues by highlighting the Seven First Principles of Regeneration, which offer guidelines to promote living systems understanding of people, watersheds, businesses, communities, and most other systems on the earth. This contribution is followed by Beth Caniglia's discussion ([Chapter 3](#)) about the centrality of systems thinking in regenerative development. In this chapter the author argues that regenerative development holds significantly more promise for systems thinking in ways that allow multiple forms of capital to coevolve to improved states than current applications of resiliency and sustainability, especially in the face of rapid urbanization and increasing climate variability. In [Chapter 4](#), Nicholas Mang continues by highlighting the need for regenerative psychology perspective. The way we define ourselves is key to develop regenerative mindsets and frameworks that influence the way we relate to and work on the development of places such as cities. Nicholas Mang discusses regenerative psychology with a focus on four interrelated psychological paradigms: Psychologies of Adjustments, Psychologies of Human Potential, Psychologies of Living Systems, and Psychologies of Spiritualization. These paradigms help in better understanding how humans can become integral members and contributors to the ecological systems in which they exist, and thus practice systems thinking holistically. An examination of the concept and practice of regenerative development through the lens of environmental justice scholarship and politics follows. As advocated by David Pellow in [Chapter 5](#), regenerative development holds a great deal of promise for moving scholars, planners, and community leaders beyond the limitations of sustainability discourses and development practices; the promise of this concept may be more fully realized if it can successfully be applied to contexts and cases where populations face extreme social, economic, political, and environmental harm and marginalization (i.e., environmental injustice). The regenerative development paradigm can indeed be pushed further by better addressing the impacts of discrimination to human populations and ecosystems. The first step to do so will be recognizing that environmental justice is not only about broad economic social issues—such as class—but also about racism, patriarchy, nativism, colonialism, and other systems of power discrimination. The second step will be addressing engrained social and environmental inequalities and power

imbalances at the root of unsustainable social behaviors, so to build regenerative, coevolutionary, and *just* human and environmental systems well into the future.

Sustainability emerged as the fusion of thinking about development and conservation, human well-being, and the biosphere. Improving human well-being while allowing the biosphere to flourish—as argued by Thomas Dietz (Chapter 6)—requires governance that supports complex coupled human-environmental system. Governance requires norms consistent with the goals of regenerative development and decision-making processes that instantiate those norms effectively. And since change is ongoing and the future uncertain, analytic deliberative governance is a key approach to facilitate social learning and adaptive risk management—key themes discussed in Thomas Dietz contribution. To close this more theoretical section, Thomas Burns, Tom Boyd, and Carrie Leslie discuss the gravity of ecological overshoot from an ethical standpoint in Chapter 7. Key topics are the mismatch between societal institutions and the alienated individualism of modern humanity, problems of cultural lag particularly as they have come to dominate the ethics around environmental issues, and the inability to making the environment a central organizing principle of regeneration. The authors offer practical steps to best prepare society to live sustainably, concentrating on an emergent ethic of ecological peace. An important point brought forward by these contributions is that regenerative development should not be limited to the restoration of socioecological systems. Many of the issues faced today, such as climate change, are grounded in the social and environmental injustices, unethical behaviors, and weak governance embedded in past and present socioecological systems. Regenerative development, with the integration of environmental justice, deliberative governance, and ethics discourses, has the potential to make a real change, and thus establish new and coevolving socioecological systems that are mutually beneficial for the society and the environment.

The more theoretical contributions of this book are followed by chapters on regenerative development practices, which illustrate the need to significantly advance the approaches to the ways urbanization, climate change, and inequality are addressed at every scale. In Chapter 8, Hunter Lovins discusses regenerative economy and the need to change the current economic model to create an economy in service to life, not consumption. Being nature sustainable because regenerative, she describes the principles and means needed to align economy with the laws of natural systems, and thus create a regenerative economy. She suggests that decarbonization of the economy and the shift to regenerative agriculture are key transformations needed to achieve regenerative economy. Regenerative businesses and economies are implemented when holistic thinking and management are applied. This is especially evident in Chapter 9 in which John Knott, the founder of CityCraft®, explains how regeneration is implemented in light of regenerative building and design. In this chapter, the author discusses building with regeneration in mind. He describes the evolution of the principles and processes of regenerative planning and presents their application in two case study areas who describes the evolution of the principles and processes of regenerative planning and presents their application in two case study areas: Dewees Island

and Noisette. The future potential of regenerative planning is discussed in this chapter in the context of a third case study, the West Denver community in Denver, Colorado. Applying regenerative thinking is pushed a step further in [Chapter 10](#), in which Rebecca Sheehan talks about the regenerative sociocultural capital of memorialization. In public spaces, social memory is often portrayed by static monument that tributes dominant powers, leaving little room for change, process, and different interpretations. Rethinking memorialization with regenerative principles in mind is central to address these social spatial justices. As a matter of fact, when sociocultural landscapes are memorialized through ongoing dynamic processes focused on holistic systems thinking, inclusive and just public spaces emerge, significantly improving the regenerative potential of cities and space memorialization for current and future human generations. The on the ground experiences drawn from these authors' works in business, economics, and building offer a unique insight to the regenerative development discourse and its potential to make sustainability work in the real world.

The last part of this book starts with a discussion around the importance of including social science knowledge in regenerative discourses. In [Chapter 11](#), Jennifer Cross and Josette Plaut first discuss the principles of regenerative development from a social science standpoint and proceed by describing the five core capabilities needed to be a regenerative practitioner—system actualizing, framework thinking, self-actualizing, developmental facilitating, and living systems understanding. These core capabilities help regenerative practitioners to become competent in Developmental Facilitating, thus fostering positive psychology principles and social networks through facilitation. Cultivating human thriving and connections between groups are indeed key in informing and deepening regenerative development thinking and processes. This chapter is followed by a regenerative definition of workforce development by Eugene Wilkerson and Allison Dake ([Chapter 12](#)). Traditionally this term was understood as the link between economic development and business competitiveness with the mission of addressing economic disenfranchisement. This definition lends itself toward a supply and demand view of workforce development. The authors of this chapter highlight how the workforce in a developed country is not a capital asset that can be consumed and discarded based on economic changes. Instead, there is a need to develop regenerative workforce solutions that benefit all within society by effectively adjusting for innovative disruption, developing people through business to have a societal impact, creating work environments that have meaning, and honoring the uniqueness of all within a workforce. The last contribution of this book ([Chapter 13](#)) by Kenneth Sagendorf and Barbara Jackson is a reflection about how integrated systems thinking can influence the curriculum for the next generation of regenerative development professionals. The authors define what is necessary to educate for regeneration and explore differences in education when the outcomes of learning become one of systems thinking rather than critical thinking. As the authors of this chapter outline, systems thinking is a necessary precursor and not a substitute of critical thinking when educating for regeneration. The authors go a step further by overlaying the principles of heroic leadership to systems thinking,

where heroic leadership is defined as a blend of self-awareness, ingenuity, love, and heroism toward the path of developmental integration for regenerative education. In a complex, uncertain, and ever-changing world, leadership is the key building block for fostering regeneration and achieving the greater good. Finally, [Chapter 14](#) by Beth Caniglia, John Knott and Beatrice Frank concludes the book.

Conclusion

If we can solve the challenges faced by cities, we can significantly improve quality of life on our planet. This book represents a concerted effort to bring together scholars and practitioners to examine the potential for the regenerative development paradigm to provide a framework that enables improved management of the complex challenges facing cities in the new climate era. The scholars in this text represent a sophisticated set of theoretical, ethical, practical, and innovative examinations that will catapult regenerative thinking into the center of social science conversations. We are confident that this book will bring social science voices directly to bear in the practice of regenerative development—a necessity if it hopes to achieve its full promise to ameliorate climate change while significantly uplifting vulnerable populations in the context of rapid urbanization. It will also advance social science research and the relevance of social science work by engaging with an alternative to sustainability that is expanding in application. The ultimate vision is a book that seamlessly unites practice and scholarship for the planet and the common good.

Note

1. You can read the full version of the New Urban Agenda at this URL: <https://www.habitat3.org/bitcache/97ced11dcecef85d41f74043195e5472836f6291?vid=588897&disposition=inline&op=view>.

References

- Agyeman, J, Bullard, RD & Evans B 2003, *Just sustainabilities: Development in an unequal world*, The MIT Press.
- Benne, B & Mang, P 2015, “Working regeneratively across scales insights from nature applied to the built environment”, *Journal of Cleaner Production*, vol. 109, pp. 42–52.
- Burgers, J & Musterd, S 2008, “Understanding urban inequality: A model based on existing theories and an empirical illustration”, *International Journal of Urban and Regional Research*, vol. 26, no. 2, pp. 403–413.
- Burrows, D 2018, “Where millionaires live in America,” viewed 3 March 2019, <https://www.kiplinger.com/slideshow/investing/T064-S001-where-millionaires-live-in-america-2018/index.html>.
- Caniglia, BS, Frank B, Delano D & Kerner B 2014. *Enhancing Environmental Justice Research and Praxis: The Inclusion of Human Security, Resilience & Vulnerability*. International Journal of Innovation and Sustainable Development vol. 8 (4) pp. 409–426.
- Caniglia, BS, Vallee M & Frank B 2017, *Resilience, environmental justice and the city*, Routledge.

- Caniglia, BS 2018, "The path to a regenerative future: The importance of local networks and bioregional contexts", *The Solutions Journal*, vol. 9, no. 2.
- Caniglia, BS 2019, "Why Denver? Sustainability innovation in the Mile High City", *The Solutions Journal*, vol. 10, no. 1.
- Dobbs, R, Sit, S, Remes, J, Manyika, J, Roxburgh, C & Restrepo, A 2011, *Urban world: Mapping the economic power of cities*, viewed 10 March 2019, <https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Urbanization/Urban%20world/MGI_urban_world_mapping_economic_power_of_cities_full_report.ashx>.
- Du Plessis, C & Brandon, P 2015, "An ecological worldview as basis for a regenerative sustainability paradigm for the built environment", *Journal of Cleaner Production*, vol. 109, pp. 53–61.
- Du Plessis, C 2012, "Towards a regenerative paradigm for the built environment", *Building Research & Information*, vol. 40, no. 1, pp. 7–22.
- Frank, B, Delano, D & Caniglia, BS 2017, "Urban systems: A socio-ecological system perspective", *Sociology International Journal*, vol. 1, no. 1.
- Gordon, L 2013, The world's largest cities are the most unequal, viewed 19 February 2019, <<https://blog.euromonitor.com/the-worlds-largest-cities-are-the-most-unequal/>>.
- Gould, K & Lewis, T 2017, *Green gentrification*, Routledge.
- Hes, D & Du Plessis, C 2015, *Designing for hope: Pathways to regenerative sustainability*, Routledge, Earthscan, Oxon, UK.
- Kilroy, AFL, Mukim, M & Negri, S 2015, *Competitive cities for jobs and growth: What, who, and how (English)*. *Competitive cities for jobs and growth*, World Bank Group, Washington, D.C., viewed 10 March 2019 <<http://documents.worldbank.org/curated/en/902411467990995484/Competitive-cities-for-jobs-and-growth-what-who-and-how>>.
- Lovins, LH, Wallis, S, Wijkman, A & Fullerton, J 2018, *A finer future: Creating an economy in service to life*, New Society.
- Mang, P & Reed, B 2012, "Designing from place: A regenerative framework and methodology", *Building Research & Information*, vol. 40, no. 1, pp. 23–38.
- McKinsey Global Institute 2011, *Urban world: Mapping the economic power of cities*, McKinsey&Company, New York, <https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Urbanization/Urban%20world/MGI_urban_world_mapping_economic_power_of_cities_full_report.ashx>.
- Musterd, S & Burgers, J 2002, "Understanding urban inequality: A model based on existing theories and an empirical illustration", *International Journal of Urban and Regional Research*, vol. 26, no. 2, pp. 403–413.
- Sassen, S 1996, "Service employment regimes and the new inequality", In M Enzo (ed.), *Urban poverty and the underclass: A reader*, Wiley.
- State of the World Forum 2016, *Can a city be sustainable?*, The Worldwatch Institute.
- Talbot, D 2018, *Why cities get the best jobs*, viewed 19 February 2019, <<https://www.forbes.com/sites/deborahthalbot/2018/09/12/why-cities-get-the-best-jobs/#722848ac1492>>.
- United Nations, Department of Economic and Social Affairs, Population Division 2018, *The world's cities in 2018—Data Booklet (ST/ESA/SER.A/417)*.
- Zhang, X, Skitmore, M, De Jong, M, Huisingsh, D & Gray, M 2015, "Regenerative sustainability for the built environment from vision to reality: An introductory chapter", *Journal of Cleaner Production*, vol. 109, pp. 1–10.

2 The regenerative paradigm: Discerning how we make sense of the world

Carol Sanford

I have often wondered how fast we could create powerful shifts toward vital, viable ecosystems and societies, if we gathered the really big players in business, philanthropy, and education around the table to work on making a better world. I was hopeful that I might get some sort of answer when I was invited recently to participate in a dinner with 20 leaders, from a huge retail business, a respected technology company, and a major foundation driving innovation on global challenges. The purpose was to discover ways to slowdown and even to reverse ecological destruction. I was sorely disappointed not in their good faith and aspiration, but in the thinking they brought to the subject. Of course, they had come up with new content and ideas, but they were thinking about ecosystems and restoration using outdated paradigms and ways of exploring opportunity. They spent two hours mired in archaic ways of working on change, only repeating the thinking that created racism, inequity in social systems, and climate change in the first place. In the following chapter, I hope to provide a basis for individuals and groups in regard to regenerative development, especially for those with the grandest intentions, who wish to explore the potential for change. I will offer a way to gain a new perspective engaging with the thinking itself that undermines discovering a new path. It is a way of thinking based on the actual living systems (humans, planet) under consideration.

Discerning paradigms

I was a sophomore in college in 1962 when Thomas Kuhn released *The Structure of the Scientific Revolution* (1970), introducing us all to the idea of paradigm shift. Kuhn taught at the University of California, Berkeley, in both the philosophy and history departments. I was questioning everything at that stage of my life, and Kuhn, who invited us as a species to consider the evolution of our interpretation of the world, gave me the framework for an appropriate and productive reasoning process. He described how we got stuck in a single prescribed view, which limited our ability to discern how nature and society work, and he offered as an alternative a more whole and complete perspective. He made us aware that the world is made up of alive and dynamic processes. Kuhn defined a paradigm as an era-based, normalized protocol, prescribed by the scientific community for

discovering answers to puzzles. A paradigm codifies a set of concepts and practices that *define* a discipline in the quest for truth. Most researchers in a given era ascribe to its dominant paradigms, and thus they become the right and only way to create new knowledge. These mental boundaries tend to blind people to other ways of considering, and they become like the water that fish swim in—invisible and normal. Like fish, we humans have no idea that we are experiencing the limitations of unexamined paradigms.

I vividly remember the shock with which I reacted to Kuhn's claims: "You mean that there is no *agreed-on, absolute truth*?" I had believed that everything I was being taught was proven science, coupled with settled religious facts. In the middle of the free speech movement and the war in Vietnam, when paradigms were shifting and new ways of thinking were still unnamed, I began to examine and give names to the paradigms that were driving our governing, educational, and economic processes. Now, after decades of exploration, I am able to discern four major paradigms through which we observe and attempt to make sense of our universe. These paradigms arose in different historical eras and are associated with distinct *worldviews*. Taken together, paradigms and worldviews guide our thinking, often without any conscious awareness on our part.

Here is a brief clarification of the difference between a paradigm and a worldview based on my personal understanding. A paradigm has to do with how we pursue knowledge: what we are able to perceive, the ways we acquire knowledge, especially in science, and what we consider to be reliable knowledge (the study of which is formally known as epistemology). Paradigms set the boundaries for the questions we pursue and the answers we are able to find. A worldview, on the other hand, is a cosmological framing of how things work. It is based on societal values and beliefs and has mainly to do with how we ought to live. We are willing to live in accord with worldviews because they help us make sense of how the world works. They vary among cultural groups, from atheist to Christian, for example, and they define the possible range of answers within disciplines, such as sociology, history, musicology, and aesthetics. They also shape agreements between disciplines, framing them so that they align with one another and work together to describe how the world operates. Within disciplines or fields of endeavor, it is worldviews that describe origins and provide coherence. In the remaining of the chapter, I will explore both paradigms and worldviews, and describe ways in which our interpretations of unfolding events are informed by paradigms. In particular, I will examine the most recently emerging global paradigm, *Evolve Capacity*—or knowing by examining the dynamics of living systems—and the *living systems worldview* that it informs and is framed by. I will also describe some ways to bring the Evolve Capacity paradigm's perspective into any kind of work.

I believe that the Evolve Capacity and the living systems worldview are the basis of regenerative practice. Since Einstein advocated for a different mind than the one that created the mess, I am offering a powerful set of frameworks for that discernment. I think it is the only way to generate a new perspective and not meet the definition of insanity, which is continuing to do things in the same way over and over and expecting a new outcome. The best approach to see a new path is to