



Armageddon or Evolution?

*The Scientific Method and
Escalating World Problems*

BERNARD PHILLIPS

ROUTLEDGE



Armageddon or Evolution?

Advancing the Sociological Imagination

A Series from Paradigm Publishers

Edited by Bernard Phillips and J. David Knottnerus

Goffman Unbound! A New Paradigm for Social Science

By Thomas J. Scheff (2006)

The Invisible Crisis of Contemporary Society: Reconstructing Sociology's Fundamental Assumptions

By Bernard Phillips and Louis C. Johnston (2007)

Understanding Terrorism: Building on the Sociological Imagination

Edited by Bernard Phillips (2007)

Armageddon or Evolution? The Scientific Method and Escalating World Problems

By Bernard Phillips (2008)

Postmodern Cowboy: C. Wright Mills and a New 21st-Century Sociology

By Keith Kerr (2008)

Struggles before Brown: Early Civil Rights Protests and Their Significance Today

By Jean Van Delinder (2008)

The Treadmill of Production: Injustice and Unsustainability in the Global Economy

By Kenneth A. Gould, David N. Pellow, and Allan Schnaiberg (2008)

Bureaucratic Culture and Escalating Problems: Advancing the Sociological Imagination

Edited by J. David Knottnerus and Bernard Phillips (2009)

Forthcoming

Ritual as a Missing Link within Sociology: Structural Ritualization Theory and Research

By J. David Knottnerus (2009)

Armageddon or Evolution?

THE SCIENTIFIC METHOD AND ESCALATING WORLD PROBLEMS

Bernard Phillips

First published 2009 by Paradigm Publishers

Published 2016 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
711 Third Avenue, New York, NY 10017, USA

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

Copyright © 2009, Taylor & Francis.

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.

Notice:

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

Library of Congress Cataloging-in-Publication Data

Phillips, Bernard S.

Armageddon or evolution? : the scientific method and escalating world problems / Bernard Phillips.

p. cm. — (Advancing the sociological imagination)

Includes bibliographical references and index.

ISBN 978-1-59451-606-1 (hardcover : alk. paper)

ISBN 978-1-59451-607-8 (paperback : alk. paper)

1. Sociology—Methodology. 2. Science—Methodology. 3. Social problems.
4. Applied sociology. 5. Sociology. I. Title.

HM511.P55 2008

301.01—dc22

2008024386

ISBN 13 : 978-1-59451-606-1 (hbk)

ISBN 13 : 978-1-59451-607-8 (pbk)

Designed and typeset by Straight Creek Bookmakers.

Contents

<i>Preface</i>	<i>vii</i>
Part I Introduction	1
The Scientific Method	5
The Aspirations-Fulfillment Gap	9
Theoretical Framework	14
Plan of This Book	17
Part II Physical and Biological Structures	23
1 Flatland Versus Spaceland/Timeland	25
2 Invisible Man Versus Visible Man	39
Part III Personality Structures	57
3 “Heart”: Alienation Versus Expressive Orientation	59
4 “Head”: Stratified or Bureaucratic Versus Evolutionary Worldview	75
5 “Hand”: Addiction Versus Meaningful and Expressive Rituals	93
Part IV Social Structures	111
6 “Heart”: Anomie Versus Cultural Value Fulfillment	115
7 “Head”: Bureaucratic Versus Scientific Worldview	133
8 “Hand”: Stratification Versus Conscious Evolution	149
Part V The Situation	165
9 “Heart”: Negative Reinforcement Versus Positive Reinforcement	169
10 “Head”: Stereotypical Versus Hypothetical Ideas	184
11 “Hand”: Conformity Versus Praxis	202

VI CONTENTS

<i>Glossary</i>	223
<i>References</i>	227
<i>Index</i>	233
<i>About the Author</i>	239

Preface

IS IT POSSIBLE TO SEE WORLD PROBLEMS as continuing to increase and yet also see a direction for solving them? Can we come to believe that the continued existence of the human race is now at stake yet also come to believe that we can indeed learn to escape from our highly threatening situation? Given what we hear and see on the mass media from one day to the next, can we still retain what Barack Obama called “the audacity of hope”? Is it indeed possible to be both extremely realistic about the current situation of humanity and also optimistic about the possibility that—following Thornton Wilder’s *The Skin of Our Teeth*—we can find a way out of escalating world problems?

My own immersion into the knowledge developed throughout the social sciences has convinced me that at this time in history the fate of the human race hangs in the balance. My reference to Armageddon in the title is by no means an effort to hype the book: I genuinely believe that we humans have only a limited time to gain understanding of the forces threatening us and to develop effective means to counter those forces. In *The Invisible Crisis of Contemporary Society* (Phillips and Johnston, 2007) I and my coauthor documented our increasing problems. And since many of them are invisible—by contrast with, say, global warming, threats from terrorist groups, or nuclear proliferation—they are all the more threatening.

To illustrate our escalating yet invisible problems, there is a widening aspirations-fulfillment gap throughout the world, or a growing disparity between what people want and what they are actually able to get. The scientific, industrial, and technological revolutions over the past five centuries have opened up for all of us previously undreamed possibilities, and there are almost no limits to our material and nonmaterial desires. Millionaires want to become multimillionaires, and multimillionaires want to become billionaires, and almost all of us including the extremely wealthy want to achieve ever more of a sense of self-worth, of living in a truly meaningful way, and of having close personal relationships. Given these accelerating aspirations, they are accompanied by increasing failures to fulfill them, and the resulting invisible aspirations-fulfillment gap is working to accelerate world problems.

One such fundamental problem that remains largely invisible is the increasing gap throughout the academic world between the ideal of following the scientific method and the actual practices—whether in the social, biological, or physical sciences—that differ sharply from that ideal. For example, that ideal requires scientists to open up to all knowledge that is relevant to the problems under investigation. My overall assumption is that human behavior is incredibly complex, as illustrated by our escalating unsolved world problems. Yet there are no fewer than 46 distinct Sections of the American Sociological Association (ASA) populated by sociologists who only rarely communicate with those in other Sections. Further, there are 397 specialized topics within sociology that are discussed in the five-volume *Encyclopedia of Sociology* (Borgatta and Montgomery, 2000), and once again we find limited communication across these many fields of knowledge, as indicated by the limited number of cross-references throughout these specialized areas.

This problem of specialization by scientists coupled with limited communication with scientists in other fields is by no means restricted to sociology. We find it equally in the other social sciences: in psychology, anthropology, political science, economics, and history. And we find it as well throughout the biological and physical sciences. One of the repercussions of such extreme specialization with limited communication across these fields is the escalating cost of higher education, far exceeding the rising cost of living. Given a much broader approach to knowledge, far fewer professors would be needed to cover the range of subjects that students study, and the coverage would be more educational for students, since they would learn to integrate their specialized knowledge to a greater degree. This same argument could also be extended to the many highly specialized fields throughout medicine, where accelerating costs also far exceed the rising cost of living. Here, the ideals of medicine also call for the integration of knowledge—just as every part of the human body interacts with every other part—yet what we all encounter is the general lack of broad understanding on the part of medical specialists. And these problems of the costs of specialization with limited communication remain largely invisible, for I've never seen any discussion of them within discussions of the rising costs of education and medical care and what might be done about them. As a result, what we have in the modern world is not the full use of the scientific method but no more than a partial use of that method, which abandons its full potential for solving problems. This is a most serious matter as social problems throughout the world continue to escalate.

Yet such specialization with limited communication throughout the sciences and throughout medicine is no more than an example of the fundamental structure of contemporary societies, and this helps us to understand why scientists behave as they do: despite their scientific ideals they remain victims of their experiences from one moment to the next as members of society. Organizations throughout the world—as we have learned from the

social sciences—are “bureaucratic.” This means that they are both highly specialized and hierarchical or “stratified.” And this also means that communication across specialized areas as well as up and down those hierarchies is quite limited. The most dramatic example in recent times was the failure of the FBI, CIA, and NSA—all part of the same U.S. government—to communicate with one another effectively about the potential for the 9/11 plot before it happened, with an excellent chance that the 9/11 catastrophe never would have happened had they done so. A far less dramatic example is my own recent experience with water collecting on the new roof of my condominium in Longboat Key, Florida. The roofing company CEO along with my condo association manager insisted that it was the “industry standard” to allow water to collect there because the membrane on the roof is thick enough and sufficiently resistant to prevent any leakage through my ceiling. Yet those individuals were behaving much the same as specialists throughout the world, focusing only on the narrow problem of water penetrating the roof. They failed to consider three other problems that are of no concern to such specialists: the development and spread of mold from standing water, the importance of avoiding standing water so as to eliminate breeding grounds for mosquitoes, and the safety problem that such standing water could pose for anyone going on the roof to initiate repairs.

My argument here is that a “bureaucratic or stratified worldview”—which includes both specialization with limited communication and persisting hierarchy or stratification—is so powerful in the way we have all learned to think, feel, and act that it is able to trump ideals as powerful as those governing scientific and medical practice. Such a worldview is so powerful that it shapes the very ways in which we perceive the world and ourselves from one moment to the next. For example, bureaucracy and stratification are oriented outward to our relationships with others, and it is no coincidence that we also have learned to look outward and avoid seeing the noses on our own faces along with our own bodies as we go about the business of living. But when we are dealing with something as broad, powerful, and concrete as a worldview, we are also dealing with a phenomenon that is invisible, just as the water in the goldfish bowl is invisible to the goldfish. We are dealing with our most fundamental assumptions about the nature of reality, given the name “metaphysics” by philosophers. Unfortunately, scientists generally see metaphysics as something to be avoided because “the nature of reality” is so abstract or general as to be extremely far from what they have come to see as central to the scientific method: very concrete procedures for experimentation or observation. Yet in this way they lose a basic understanding of how the scientific method actually works: testing abstract or general ideas or theories against concrete or empirical evidence. And even the extremely abstract ideas containing our metaphysical assumptions must be tested, for it is those assumptions—such as a bureaucratic or stratified worldview—that shape every aspect of the research process.

My references in these few pages to the aspirations-fulfillment gap, a largely invisible problem that is fundamental throughout the book, and is linked to personal and social problems, give the reader a preview of Figure I-1 in the introduction. And my references to that gap together with a highly specialized approach to the scientific method as well as to a bureaucratic or stratified worldview provide the reader with a preview of Figure I-2, anticipating my overall analysis of the sources of that problem. That relatively invisible problem—following the first paragraph of this preface—is much of the basis for my initial statement that “world problems” are “continuing to increase,” that “the continued existence of the human race is now at stake,” that we should pay serious attention to “what we hear and see on the media from one day to the next,” and that we should be “extremely realistic about the current situation of humanity.” But the title of this book is not just “Armageddon.” I am not in the business of doom and gloom. The title is “Armageddon or Evolution?” What about the rest of what is in that first paragraph? What about the possibility that we can “see a direction for solving” world problems? What about the idea that we can “learn to escape from our highly threatening situation”? What about “the audacity of hope”? What about the possibility that “we can find a way out of escalating world problems” by “The Skin of Our Teeth”?

We might see that first paragraph as illustrating what might be called a “pendulum metaphor or image”—an idea so concrete that we can perceive or visualize it—that illustrates not only Figure I-2 but also an alternative to Figure I-2 that is sketched in Figure I-3. Let us imagine a pendulum swinging to the left side and then to the right side and swinging in ever-widening arcs. Following the ideals of the scientific method, the swing to the left suggests a commitment to solving a given problem, and the swing to the right suggests some progress in understanding and solving that problem. That progress is suggested by the pendulum’s swinging farther to the right than previously. And that wider swing to the right yields additional momentum for a wider swing to the left, suggesting greater commitment to the problem. That greater commitment in turn yields a swing still farther to the right and so on with no limit as to how far the pendulum can swing in both directions. The first paragraph of the preface describes a swing very far to the left as well as very far to the right: entertaining the possibility of Armageddon can help us to entertain the possibility of the further evolution of the human race.

Yet that pendulum metaphor can be employed equally to explain the increasing aspirations-fulfillment gap and increasing personal and social problems, as suggested by Figure I-2. Following that figure, the aspirations-fulfillment gap along with personal and social problems will get worse and worse on the right-hand side to the extent that our response to it is to invoke the only approach that we know: our bureaucratic or stratified worldview and scientific method. Thus, increasing problems will yield greater momentum for the very approach that is much of the basis for increasing those

problems further. To illustrate, rising costs of medical care have led to a pending 10 percent cut in Medicare payments to physicians. But the result of this is to motivate many physicians with Medicare patients—who are generally needier than others—to give up treating those patients and focus on those who are more well-to-do. This is further illustrated by the spread of “boutique” medical practices, where patients must pay a substantial amount up-front before they can be treated when medical problems develop. The result of this narrow effort to control medical costs—without taking into account the complexity of the situation—is, then, increasing hierarchy or social stratification. In other words, the bureaucratic worldview of politicians has succeeded in yielding worse problems for poor patients, who will now have access to fewer doctors and overcrowded waiting rooms. The fulfillment of those patients’ aspirations for excellent medical care moves farther away from their aspirations.

What is essential in moving from Figure I-2 to Figure I-3—taking into account the urgency of such a move as illustrated by Figure I-1—is an alternative to our bureaucratic or stratified scientific method and bureaucratic or stratified worldview. What is equally essential is that we take into account the relatively invisible nature of what is involved, for that prevents us from seeing the enormous problem that we face. To further illustrate these problems, let us consider the audiences for this book. Sociologists and other social scientists, following their bureaucratic or stratified worldview and approach to the scientific method, will look for evidence that I have read and taken into account the highly specialized published articles and books that they have been working with over many years. Failing my ability to demonstrate that—and it would take a book of many thousands of pages to do that adequately for social scientists in general, given their thousands of specialized areas—this book will lose credibility in their eyes. As for the more general readers, to the extent that I make any effort to bring forward the technical developments throughout the social sciences—as illustrated by Figures I-1, I-2, and I-3—they will come to believe that the book is too difficult for them to understand and will lose interest in it. In both cases, the bureaucratic or stratified worldview will succeed in trumping my own efforts to communicate to a wide audience.

Considering this situation, however, my task is by no means hopeless. For one thing, given the increasing problems throughout the contemporary world, there will be greater willingness to question traditional procedures for solving problems and traditional ideas throughout the social sciences. For another thing, I am betting on the incredible potential of every reader and every human being to learn from experience, and our shared experience has been that problems are indeed increasing. On my own part, what I must attempt to do is to follow the pendulum metaphor—in the context of Figure I-3 but not Figure I-2—to demonstrate that problems are indeed increasing despite efforts to solve them. In other words, I must move that pendulum far to the left to help convert invisible problems like the aspirations-fulfillment

gap to visible problems. In addition, I must provide an alternative approach to the scientific method that promises to make progress in solving our growing problems. Such an alternative must build on how the scientific method has actually worked effectively over the years, taking into account the scientific ideal of opening up all knowledge relevant to a given problem. Further, and this will be more difficult—given the incredible complexity and invisible nature of a worldview—I must provide an alternative worldview that also promises progress in solving our fundamental problems.

Yet I am not working alone in these efforts. The effectiveness of the physical and biological sciences over five centuries has convinced me of the incredible power of the scientific method to solve fundamental problems, granting that the order of complexity of those problems does not approach the problems of human behavior. The insights from the humanities—from philosophers, novelists, playwrights, and poets—have strengthened my conviction as to the infinite potential of every single human being. And the achievements of social scientists in the nineteenth and twentieth centuries—granting the fact that they have yet to be integrated—are equally encouraging. More specifically, one figure within the history of social science has followed the pendulum metaphor to a substantial degree and has given me a clear direction for building on his work: C. Wright Mills. I was a premedical student at Columbia University in the early 1950s until I chanced to take several of Mills's courses, and that changed my entire life. Mills's books were written—as this one is—not simply for sociologists but for a much broader audience. Following the pendulum metaphor, he was deeply committed to confronting the fundamental problems of the modern world, as is well illustrated by his books *White Collar* (1951), *The Power Elite* (1956), *The Causes of World War Three* (1958), and *Listen, Yankee: The Revolution in Cuba* (1960). At the same time that he focused on problems, he also focused on solutions, both in these books and in a book that was voted by the members of the International Sociological Association as the most influential book for sociologists published during the entire twentieth century: *The Sociological Imagination* (1959).

That book pointed a direction for a much broader approach to the scientific method, one that follows the ideal of opening up to a full range of phenomena that are relevant to any given research problem, as illustrated by this passage:

The sociological imagination . . . is the capacity to shift from one perspective to another—from the political to the psychological; from examination of a single family to comparative assessment of the national budgets of the world; from the theological school to the military establishment; from considerations of an oil industry to studies of contemporary poetry. It is the capacity to range from the most impersonal and remote transformations to the most intimate features of the human self—and to see the relations between the two. (1959: 7)

Although I had written four textbooks on research methods throughout the latter part of the twentieth century—influenced deeply by Mills's vision of the possibilities of social science—it was only after my retirement from active teaching in 1999 that I became serious about confronting the failure of the social sciences to live up to those possibilities. I started to organize informally what came to be called the Sociological Imagination Group, meeting annually starting in 2000. In my *Beyond Sociology's Tower of Babel: Reconstructing the Scientific Method* (2001), I attempted to demonstrate and illustrate the possibility of not only building on Mills's understanding of the scientific method in a highly systematic way but also building most substantially on the work of two colleagues who had joined me, Harold Kincaid and Thomas J. Scheff. Kincaid, a professor of philosophy, helped me to understand both the limitations of traditional assumptions by social scientists about the scientific method as well as the importance of alternative assumptions that follow scientific ideals. Scheff taught me the enormous complexity of the momentary situation, such as the emotional dynamics that are involved, based in part on three monographs he had written during the 1990s. The three of us proceeded to edit a volume of the papers presented at the first meeting of the Sociological Imagination Group: *Toward a Sociological Imagination: Bridging Specialized Fields* (2002). That approach to the scientific method—which we came to call the Web and Part/Whole Approach—was developed further in subsequent books: *The Invisible Crisis of Contemporary Society* (Phillips and Johnston, 2007), *Understanding Terrorism* (a collection of papers presented at our San Francisco conference in 2004: Phillips, ed., 2007), and *Bureaucratic Culture and Escalating Problems* (a collection of papers presented at our Montreal conference in 2006: J. David Knottnerus and Phillips, eds., forthcoming).

All of these five books—including the first one, *Beyond Sociology's Tower of Babel*—focused not only on a broad approach to the scientific method in order to fulfill scientific ideals but also on our worldview, which is powerful enough to trump scientific practices that fail to conform to it. More specifically, they contrasted a bureaucratic or stratified worldview pointing away from scientific ideals with an interactive or evolutionary worldview that reinforces those ideals. The difficulties involved in this effort are enormous, given the breadth of worldviews, their invisible nature, and the orientation of social scientists in general to define the scientific method mainly in terms of concrete procedures rather than abstract ideas like worldviews, which are metaphysical in nature. Nevertheless, granting the limited attention to worldviews by scientists, it is indeed possible to make progress in understanding their nature. For example, one of the two major conclusions of *The Invisible Crisis of Contemporary Society* (with the other being evidence for an increasing aspirations-fulfillment gap) was this: “*To the degree that a worldview or metaphysical stance is stratified [or bureaucratic] versus interactive [or evolutionary], there will be a large gap between aspirations and their fulfillment*” (Phillips and Johnston,

2007: 234). This conclusion also implies its converse: To the degree that a worldview or metaphysical stance is interactive or evolutionary, there will be a small gap between aspirations and their fulfillment.

Yet this is no more than a beginning in any effort to understand the nature of these two worldviews or their impact on us. Exactly what is their nature? Although we know a fair amount about bureaucracy, ideas about evolution have varied greatly. Just what is an “evolutionary or interactive worldview”? The idea of evolution has been used in many different ways, and a number of them have hurt rather than helped our understanding of human behavior and have even contributed to our problems. We might think of Hitler’s vision of Aryans as the “master race,” and his mounting the Holocaust as a way of eliminating “inferiors” such as Jews and supposedly moving toward a higher development of the human race. We might think of Charles Darwin’s theory of biological evolution as advancing our understanding of biology to an enormous degree. We might also think of Auguste Comte—the early founder of sociology—with his vision of the human race as necessarily going through three stages: theological, metaphysical, and positive, where the positive stage is the age of science and industrialism. Or there was Herbert Spencer’s theory of necessary movement from homogeneity to heterogeneity or specialization. And we have another sociologist, Ferdinand Tönnies, and his view of necessary movement from *Gemeinschaft* or community to *Gesellschaft* or impersonal society, an evolutionary movement that is not in a progressive direction. More recent theories of evolution are illustrated by the anthropologist Leslie White and the sociologists Gerhard and Jean Lenski who emphasize the importance of technological development.

My own approach to the nature of an “evolutionary worldview” has to do not with biological evolution but with the development of the human being’s personality structure along with the social structure of human societies. Yet it is similar to Darwin’s theory of biological evolution, as explained in part by the following passage from *The Structure of Scientific Revolutions* (1962) by Thomas Kuhn, a most influential historian of science:

All the well-known pre-Darwinian evolutionary theories ... had taken evolution to be a goal-directed process. The “idea” of man and of the contemporary flora and fauna was thought to have been present from the first creation of life, perhaps in the mind of God. That idea or plan had provided the direction and the guiding force to the entire evolutionary process. Each new stage of evolutionary development was a more perfect realization of a plan that had been present from the start. For many men the abolition of that teleological kind of evolution was the most significant and least palatable of Darwin’s suggestions. The *Origin of Species* recognized no goal set either by God or nature.... Even such marvelously adapted organs as the eye and hand of man—organs whose design had previously provided powerful arguments for the existence of a supreme artificer and

an advance plan—were products of a process that moved steadily from primitive beginnings but toward no goal. (1962: 170–171)

Kuhn distinguishes here between “evolution toward” and “evolution from,” with the latter rather than the former corresponding to Darwin’s theory of biological evolution. There are no inevitable movements in a progressive direction, no necessary stages that the evolutionary process travels through, and a great deal of variation in the evolution of the multitudes of flora and fauna on the planet, depending on the particular and complex circumstances within each evolutionary situation. For me as well as for Kuhn, there are similarities between this process of biological evolution and our understanding of the nature of the scientific method. Just as biological evolution does not proceed “toward the realization of a plan that had been present from the start,” neither does the scientific method—when it is practiced according to our ideals—proceed so as to conform to some hidden agenda, such as a bureaucratic or stratified worldview with its focus on specialization with limited communication and persisting hierarchy or social stratification. Unfortunately, however—due to what I am convinced is the universality of our bureaucratic or stratified worldview—practices throughout the many sciences do indeed follow that hidden agenda. It is an agenda that is well illustrated by the near-universal failure of scientists to measure and report on their own impact on the research process at its every stage, thus closing off the possibility of their own genuine openness to and interaction with their research environment. For example, an interviewer will assess the responses of an interviewee yet fail to assess his or her impact on the interviewee, an impact that will work to color and shape those responses in one way or another. Granting that other researchers do have an opportunity to corroborate a given investigator’s findings, they also are subject to the same outward orientation of a bureaucratic or stratified worldview; and as a result they will not uncover this failure to assess that coloring and shaping. They too will remain insensitive to the central importance of what has come to be called “investigator effect.”

Movement in the direction of “evolution from” rather than “evolution toward”—and also in the direction of what I have called an “evolutionary worldview”—requires a scientific method that is extremely broad, one that is broad enough to take into account investigator effects. The history of the social sciences has seen the collection of a vast amount of knowledge of human behavior, and this is indeed an incredible resource for us today as we proceed to confront the problems that threaten modern society. Yet that knowledge is located in relatively unconnected bits and pieces, given the prevailing bureaucratic or stratified worldview. Those pieces must be integrated to penetrate the complexity of those problems in any profound way, following the ideals of the scientific method rather than current practices. Looking to Figure I-3, such a scientific method can—a little at a time—yield a shift toward an evolutionary worldview, and also work to

narrow the aspirations-fulfillment gap, resulting in some progress in solving personal and world problems.

Given the discussion of the background of this book, how might we proceed? Now that there is evidence for increasing problems—a major conclusion of *The Invisible Crisis of Contemporary Society*—I want to further develop that sense of problem, suggested by the metaphor of the pendulum's moving farther to the left. For many of our fundamental problems, such as the aspirations-fulfillment gap, remain largely invisible. Unless it becomes clear to the reader that we are all facing a mammoth crisis that is continuing to advance, there will be no motivation to confront the most difficult tasks of not only our traditional approach to the scientific method but also our bureaucratic worldview, one that guides all behavior from one moment to the next. It is such a deep sense of problem that is located at the heart of a broad approach to the scientific method. Mills's own deep commitments to confronting world problems were much the basis for his ability to communicate so effectively and so widely not only to sociologists but also to other audiences.

The importance of a deep sense of problem—not just about the failure of the traditional approach to the scientific method but also about the link between our bureaucratic way of life and our escalating problems—cannot be overestimated. Yet that deep sense of problem will quickly disappear unless our pendulum can make use of the momentum for movement far to the right. Throughout my own career I developed many strong criticisms of the traditional approach to the scientific method, and I also suggested directions for a much broader approach that followed scientific ideals, an approach not far from that outlined in my *Beyond Sociology's Tower of Babel*. Yet I never was able to venture as far as to criticize our bureaucratic worldview and way of life. Part of my problem—shared by most social scientists and based on our invisible commitment to a bureaucratic worldview—was a commitment to a specialized view of the social scientist by contrast with those who apply scientific knowledge, such as political leaders, teachers, social workers, psychotherapists, nurses, and business people. Just as physical scientists leave to engineers the business of applying physical science to solve problems, so too did I implicitly see myself as developing basic knowledge while leaving to others the business of using that knowledge to solve problems. As a result, my pendulum was limited in its movement to the left, and this limited its movement to the right.

As for movement far to the right, perhaps the most important finding of the social sciences throughout the entire twentieth century is the overwhelming importance of language in shaping human behavior. It is language more than any other characteristic of human beings that distinguishes us from all other forms of life, granting that some mammals have been able to develop the very beginnings of language. In my recent books, I concluded that we humans have made only limited usage of the three potentials of language. First is the gradational orientation, as illustrated by the quantita-

tive and numerical emphasis throughout the physical as well as much of the biological sciences. Then there is the dichotomous, either-or emphasis within our ordinary usage as well as throughout the social sciences, for every word we use divides the world in two: that to which the word refers, on the one hand, and everything else, on the other hand. Third is language's orientation to the senses, imagery, metaphors, or figures of speech, as emphasized throughout the humanities. Just as we have specialization among these three broad fields of language, so do we all learn to limit our usage of all three potentials of language. Further, dichotomy is far more predominant than gradation or metaphor—regardless of our profession—because that is the emphasis of everyday speech and thought.

Alvin Gouldner, another sociologist whom I knew personally, developed a vision of how all of us can move toward making fuller use of the infinite potential of language:

The pursuit of . . . understanding, however, cannot promise that men as we now find them, with their everyday language and understanding, will always be capable of further understanding and of liberating themselves. At decisive points the ordinary language and conventional understandings fail and must be transcended. It is essentially the task of the social sciences, more generally, to create new and "extraordinary" languages, to help men learn to speak them, and to mediate between the deficient understandings of ordinary language and the different and liberating perspectives of the extraordinary languages of social theory. . . . To say social theorists are concept-creators means that they are not merely in the knowledge-creating business, but also in the language-reform and language-creating business. In other words, they are from the beginning involved in creating a new culture. (Gouldner, 1972: 16)

In this passage Gouldner helps us understand how to move our pendulum very far to the right where we learn to solve problems. Gouldner was no match for Mills in conveying to his readers a very deep sense of problem. But he was able to put forward ideas that advance the development of the kind of broad scientific method that Mills called for in *The Sociological Imagination* (1959). Just as physical scientists make full use of the technical language of physics—with concepts such as "force," "atom," and "valence"—so must those of us who are struggling with understanding the incredible complexity of human behavior make full use of the technical language of the social sciences. That language is illustrated by the concepts of "bureaucratic" and "stratified" introduced in this preface and that will be used throughout the book. Such concepts do not oppose what ordinary language has taught us. Rather, they help us further the insights that we gain from ordinary language. For Gouldner, language is not just an effective way of thinking and communicating but also a way of solving our problems, including the most difficult ones that scientists confront.

This book represents my effort to build, not only on the contributions of Mills and Gouldner, but also on the five books linked to the Sociological Imagination Group that were cited earlier. As a result, this book focuses on the relatively invisible problem of the aspirations-fulfillment gap, given its close links to a wide range of fundamental problems throughout contemporary society. Further, it distinguishes between a bureaucratic or stratified scientific method and worldview versus an evolutionary or interactive scientific method and worldview. Pointing toward an applied direction—by contrast with the neutral emphasis throughout the social sciences—this book focuses on how to move from the former to the latter scientific method and worldview. This book also makes use of language's dichotomous, gradational, and metaphorical potentials, all within the context of putting forward what Gouldner called for: the "extraordinary" language of the social sciences. Overall, this book is guided by the pendulum metaphor, moving as far to the left and right sides as possible.

I am aware that the books written within the context of the Sociological Imagination Group have made only a partial case for the failures of a traditional approach to the scientific method along with a link between our bureaucratic or stratified worldview and escalating world problems. I am also aware that these books have made only a partial case for the potential of the Web and Part/Whole Approach to the scientific method coupled with an evolutionary or interactive worldview for confronting those problems effectively. And I suspect that this book will do no more than make a partial case for moving from the former approaches to the scientific method and worldview to the latter ones. To make a credible case to the full range of social scientists would require a book that would dig deeply into hundreds of literatures throughout the social sciences. Such a book would be thousands of pages long and would put off readers who are not professional social scientists. It would be a book that I—given the limitations of my own background—would be unable to write.

Instead, I have written a book that is suggestive far more than conclusive. Yet it is my hope that it will be sufficiently suggestive that social scientists—granting the book's limited analyses of literatures throughout the social sciences—will become motivated to learn more about the publications and activities of the Sociological Imagination Group. To that end, our Web site—www.sociological-imagination.org—provides excerpts from our books, other material, and information about our annual conferences. And I would welcome correspondence to my e-mail address: berniefpls@aol.com. Given what I am convinced are escalating social problems, I hope that social scientists will join me and others in the Sociological Imagination Group in our efforts to move as rapidly as possible toward a scientific method that follows scientific ideals and toward a worldview that helps all of us confront those problems ever more effectively.

To put the matter more forcefully, I am convinced—based on both the publications cited earlier and my own personal experiences—that the

human race is heading rapidly toward extinction, given growing visible and invisible problems. I am also convinced that it is social scientists—far more than any other group—who hold the keys that can unlock the door to understanding our complex and threatening problems. Further, I am equally convinced that the present direction of the social sciences—whether in our teaching, our research, our publications, our conferences, or our communications—is making little headway relative to those problems. Whether the previously mentioned publications and this one yield a direction for making more headway on those problems, I am also convinced that social scientists throughout the world must act as quickly as possible to take responsibility for their crucial role in learning how to understand and solve those problems. In this book I am attempting to communicate these convictions and make them credible to readers. If social scientists share these convictions yet fail to act on them, then it is they who will share a guilt—far greater than that of the Nazis for the Holocaust—for the end of humankind.

As for the audience of general readers who are not social scientists, I believe that this book can indeed be understood by the general reader, given its limited use of technical language and my own efforts to explain the technical concepts I do employ. Here, the Web site previously mentioned with its short papers can help the general reader. Two short papers are “Evolutionary Manifesto” and “Manifesto 2.” A longer paper that is not particularly technical—dealing with problems encountered by the residents of nursing homes—is “Institutionalized Elder Abuse.” There is also the first draft of an introductory chapter to a new book that I and a colleague are working on: “Manifesto for Deep Democracy.” Also included is a short biography of C. Wright Mills that I published. It is my hope that general readers will become interested in making use of sociological ideas in their efforts to confront personal and world problems.

The crucial problem that you will face is a bureaucratic worldview teaching you that only the experts or professionals can solve such problems. Yet our growing problems throughout the world suggest the severe limitations of our experts. Given this situation, I believe that you, as general readers, should consider carefully your own personal responsibilities relative to the world situation at this time in history. If the experts generally have failed us, and if they are continuing to fail us, what kind of future can we expect for ourselves and for our children and grandchildren? And if you have a capacity no less than that of our experts to learn and confront the world’s deepening problems—in addition to your own personal problems—what are you doing about it? Are you simply marking time, waiting for the bombs to fall? Or are you proceeding to learn how to make fuller use of your human capacities to act decisively and effectively in the face of threatening problems?

I would like to acknowledge the substantial contributions that J. David Knottnerus—my coeditor of the “Advancing the Sociological Imagination” series with Paradigm Publishers has made to my ideas in general and to

this book in particular. His theory of structural ritualization has shaped my own understanding of the rituals of individuals and groups, and his insights with respect to this manuscript have helped me to revise it. I am also deeply appreciative of David Christner's faith in my own possibilities and his encouragement to write a book for readers who are not only sociologists. And I want to add my feelings of gratitude to Dean Birkenkamp, a publisher and a friend whose encouragement has been no less important to me, and whose vision for what should be published at this time in history sets a high standard for publishers throughout the world.

My own overall direction for this book and the others I've written within the context of the Sociological Imagination Group is based largely on the work of two colleagues, Harold Kincaid and Thomas J. Scheff, and I am most grateful to them. Louis Johnston, coauthor of *The Invisible Crisis of Contemporary Society*, has continued over the years to educate me, and his second career as a sociologist following a medical career provides an example for others who have not yet understood the problem-solving potential of the social sciences.

I also want to thank these individuals who have contributed recently to my understanding: Hans Bakker, Stu Bennett, Jerome Braun, Dianne Davis, Frank Elwell, Uta Gerhardt, Elizabeth Gill, Jeff Goldfarb, Ken Gould, Kevin Gotham, Douglas Hartmann, Paul Johnson, Debbie Kasper, Joan Kennedy, Keith Kerr, Louis Kontos, Douglas Meyer, Vince Montes, David Pellow, Michael Phillips, Todd Powell-Williams, Adam Rafalovich, Salomon Rettig, Jim Roach, Yaffa Schlesinger, Allan Schnaiberg, Sandro Segre, Arlene Stein, David Stearns, Emek Tanay, Alex Thornburg, Jonathan Turner, Jason Ulsperger, and Jean Van Delinder.

Finally, there are about a hundred individuals I mention near the beginning of the introduction—sociologists, other social scientists, philosophers, novelists, educators, and other applied scientists—whose ideas have set the stage for this book. To the extent that this book amounts to anything, it is because of a broad framework that reaches out to the works of those authors. Each one of them illustrates the incredible potential of the scientific method, and my thanks go out to them for their contributions.

*Bernard Phillips
Longboat Key, Florida
January 2008*

PART I

Introduction

I would like to recommend that readers begin with the preface before reading this introduction. By so doing, they will see more clearly my rationale for the approach that I am taking to this book. Further, the preface and introduction reinforce one another in their complementary ways of emphasizing accelerating world problems and giving directions for solving them. That reinforcement is urgently needed, given what I see as a near-universal failure to understand the threats posed by the present world situation to the future of the human race.

And I would also like to alert the reader to my own problem of attempting to reach out to—and gain credibility with—three different audiences: sociologists, other social scientists, and general readers. My own approach to knowledge is as broad as I can make it, given my conviction as to the incredible complexity of human behavior in comparison with physical and biological phenomena. Yet the high degree of specialization coupled with limited communication to be found both inside and outside the academic world works against efforts to integrate knowledge. For example, within sociology alone are some 400 highly specialized areas, and specialists in any given area look for the analysis of studies that they believe are essential for making progress in their particular fields of knowledge.

Given this situation, which I describe in the preface, the best that I can do is to alert the reader to this problem along with my own limitations. What may help to some extent is that the arguments in this book are closely supported by five other recently published books: *Beyond Sociology's Tower of Babel: Reconstructing the Scientific Method* (Phillips, 2001), *Toward a Sociological Imagination: Bridging Specialized Fields* (Phillips, Kincaid, and Scheff, eds., 2002), *The Invisible Crisis of Contemporary Society: Reconstructing Sociology's Fundamental Assumptions* (Phillips and

Johnston, 2007), *Understanding Terrorism: Building on the Sociological Imagination* (Phillips, ed., 2007), and *Bureaucratic Culture and Escalating Problems* (Knottnerus and Phillips, eds., forthcoming). Those books built on the work of a wide range of authors from diverse fields.

The emphasis of those works has been on the literature of sociology, linking their arguments to work by these authors, and not just with quick references: Andrew Abbott, Jeffrey Alexander, Hans Bakker, Howard Becker, Joseph Bensman, Albert Bergesen, Donald Black, Herbert Blumer, Pierre Bourdieu, David Britt, Walter Buckley, Lawrence Busch, Charles Derber, Emile Durkheim, Frank Elwell, Eric Erikson, Richard Farson, Anthony Giddens, Erving Goffman, Alvin Gouldner, Antonio Gramsci, Jurgen Habermas, Douglas Hartmann, Chanoch Jacobsen, Debbie Kasper, James Kimberly, David Knottnerus, Louis Kontos, Richard Lachmann, Marc LaFountain, Jack Levin, Omar Lizardo, Nicholas Luhmann, George Lundberg, David Maines, Karl Marx, Robert Merton, Robert Michels, C. Wright Mills, David Moberg, Vince Montes, Anthony Oberschall, William Ogburn, Fritz Pappenheim, Suzanne Retzinger, Thomas Scheff, Sandro Segre, Georg Simmel, David Snow, Arlene Stein, Piotr Sztompka, Charles Tilly, Jason Ulsperger, Arthur Vidich, Immanuel Wallerstein, Max Weber, Robin Williams, and Erik Olin Wright.

Other social scientists have not been neglected by those five books that set the stage for this one, as illustrated by substantial links to the works of these authors: Jane Banks, Joan Bondurant, Daniel Boorstin, Clarence Brinton, Donald Brown, Amy Chua, James Davies, Leon Festinger, Ted Gurr, Karen Horney, Susanna Hornig, George Kelly, Thomas Kuhn, Daniel Lerner, Leo Lowenthal, Walter Ong, Milton Rokeach, Robert Rosenthal, and Robert Sommer.

As for the general reader, those five books also included substantial links to work by these philosophers, novelists, educators, and other applied individuals: Edwin Abbott, John Berger, Robert Browning, John Dewey, Paulo Freire, Mohandas Gandhi, Hermann Hesse, Fred Hoyle, Ivan Illich, Harold Kincaid, Alfred Korzybski, Friedrich Nietzsche, George Orwell, Carlos Pecotche, Charles Peirce, W. V. O. Quine, J. S. Ullian, Jack Vance, and A. E. van Vogt.

These efforts to build on and integrate existing knowledge, however, do no more than scratch the surface of available yet unintegrated knowledge bearing on the broad problems that I am investigating. Given what I am convinced are increasing world problems posing a most threatening situation for humanity at this time in history, what is urgently required are widespread commitments by growing numbers of sociologists, of other social scientists, and of the general public to confront these problems. To that end, I hope that this book coupled with the preceding publications of the Sociological Imagination Group—as introduced on the Web site www.sociological-imagination.org—will prove to be useful.

I believe that it is social scientists more than any other group who hold the keys to understanding the deepening problems of the contemporary world. I also believe that we social scientists must learn to take this responsibility very seriously. For this to occur, however, the enormous danger of

the present world situation must be communicated effectively to social scientists. In addition, some direction—however preliminary it is and however inadequate it may ultimately prove to be—that promises to make progress on those problems must also be communicated to social scientists, and communicated most effectively. That combination of the problems we face along with a possible solution is suggested by the title of this book: “Armageddon or Evolution?” The importance of this combination is also suggested by the pendulum metaphor discussed in the preface. For this combination can point us toward ever deeper commitment to those problems and ever more progress in understanding them, using a broad approach to the scientific method that succeeds in challenging our bureaucratic or stratified worldview and points us humans in an evolutionary direction.

Chicken Little claimed that the sky is falling, and he may not have been exaggerating. World War II with its massive annihilation of civilian populations and its Holocaust, the cold war with its threats of nuclear devastation, the mounting evidence for global warming and its potential for catastrophic consequences, and the rise of Al Qaeda coupled with the events of 9/11 are only some indications of the increasing problems that confront us and threaten our very survival. For the first time in any era we have weapons capable of destroying all human beings on earth, yet we have little understanding of how to prevent those weapons from being used or ever more destructive weapons from being developed. Never before in history have we been confronted with so many fundamental problems that remain unsolved. Some would argue that the balance of terror between nuclear nations prevents such weapons from ever being launched because nations would fear retaliation. Yet small groups like Al Qaeda would not be deterred by any such fear. Given the continuing development of technologies for producing weapons of mass destruction coupled with the spread throughout the world of those instruments of death, it appears to be just a matter of time before we begin to experience the unthinkable.

Martin Rees, England’s Astronomer Royal, has argued in *Our Final Hour: A Scientist’s Warning* that “The ‘downside’ from twenty-first century technology could be graver and more intractable than the threat of nuclear devastation that we have faced for decades” (2003: vii). A small group or even a single individual could learn to concoct a biological cocktail deadly enough to kill many millions or even billions. Is this no more than fear-mongering by “prophets of doom and gloom” to advance their own political agenda? Yet evidence from the work of Rees and others suggests otherwise. The physical and biological sciences have yielded knowledge that has been basic to the shaping of the modern world. Unfortunately, however, that shaping includes the construction of ever more powerful means for destroying that world.

What is happening to us humans, given all of our knowledge, our ability to combat illness and disability, and our achievement in putting a man on the

4 PART I

moon? Why are these threats accelerating at this particular time in history? George Lundberg, a sociologist who was much concerned with the failure of sociologists to confront world problems effectively, quotes from an article by Nikita S. Khrushchev in the October 1959 issue of *Foreign Affairs*:

Is it possible that when mankind has advanced to a plane where it has proved capable of the greatest discoveries and of making its first steps into outer space, it should not be able to use the colossal achievements of its genius for the establishment of a stable peace, for the good of man, rather than for the preparation of another war and for the destruction of all that has been created by its labor over many millenniums? Reason refuses to believe this. (1947/1961: 133)

Back in 1711 Alexander Pope wrote in *An Essay on Criticism* that “a little learning is a dangerous thing.” We might see our understanding of physical and biological phenomena coupled with our extremely limited understanding of human behavior as illustrating what Pope called “a little learning.” Human phenomena are far more complex than physical and even biological phenomena. We can thus understand the efforts of physical and biological scientists to avoid that complexity in the interest of advancing their understanding of simpler phenomena. We might, then, see such one-sided learning as a fundamental basis for the dangerous world that we are now experiencing. Our knowledge has yielded the AK-47 that schoolchildren might use on their classmates. But it has failed to yield the understanding that would prevent such weapons from being employed. Our “little learning” has yielded a thing-oriented materialistic civilization, since that is what physical technologies can produce. But it has failed to yield the understanding called for by our democratic ideals. For democracy to work we require an education in the complexities of modern problems so that society as a whole can make intelligent political decisions. Yet our limited knowledge of human behavior stands in the way of fulfilling those ideals.

Our situation seems to be similar to that of the passengers who flew United Flight 93 on 9/11. It appears that we too are flying, as we move through space on the planet Earth, on a suicide mission pointing us all toward disaster. Just as most of those passengers in the film on that tragedy probably were completely occupied with decisions like whether to have a Coca-Cola or a Sprite, we too are playing our own games of “trivial pursuit” while failing to gain awareness of our dangerous situation. Sigmund Freud had a good deal to say about such ostrichlike behavior, where we bury our heads in the sand rather than raise our problems to the surface so that we can confront them. This process of avoiding paying attention to problems that threaten the very fabric of our existence has some merit in the short run. It helps us to cope with immediate problems in our everyday lives and achieve some degree of satisfaction as a result, all the while avoiding problems that we are presently unable to solve. In the long run, however, such avoidance works to ensure ultimate disaster.

Yet some of the passengers on United 93 proceeded to examine just what the hijackers were about—as portrayed in the film—and learned the nature of their mission as the plane reversed its direction and headed toward Washington. They developed a strategy that included battering down the cockpit door and moving a passenger with some flying experience into the cockpit. Then, with that memorable phrase transmitted by a cell phone—“Let’s roll!”—they proceeded to overpower the hijackers and prevent them from crashing the plane into the White House or the Capitol. Sadly, they were unable to prevent the hijackers from crashing the plane from its low altitude into a Pennsylvania field, killing everyone on board. Can we too learn the nature of our own situation, which evidence suggests is heading us toward destruction? And, paralleling the accomplishment of those few passengers on United 93, can we too develop a strategy for confronting our basic problems? Further, can we parallel the motivation of those passengers, as indicated by their “Let’s roll!” commitment, and initiate decisive actions before it is too late to solve our problems?

The Scientific Method

If those passengers were able to learn about their situation and confront their life-threatening problem, the rest of us can learn to do the same. We humans are the product of some four billion years of biological evolution. As a result, we have developed a capacity to learn, using the tool of language, that is far superior to that of any other creature on earth. Thus, we should have the capacity to learn the nature of our own situation. And we certainly have the ability to become motivated to act decisively when our lives are at stake. By far the most important tool that we have for learning, in addition to language, is the scientific method. That is a process that has enabled us humans to shape the world over the last five centuries with a continuing scientific and technological revolution. And that process depends on written language. For the investigator must become aware of the results of previous research relating to the problem at hand to make progress in understanding that problem.

Yet we should allow for the enormous complexity of any social problem whatsoever. Our long-term human history shapes every single social problem that affects us. By contrast, although physical phenomena are indeed affected by prior events, they are rarely changed in any fundamental way, so that simple mathematical formulae can predict their behavior accurately. However, social scientists generally have failed to take into account the full complexity of human behavior as they have attempted to use the scientific method in their research. For example, there are no fewer than 46 distinct Sections of the American Sociological Association (ASA), with each one focusing on a distinct aspect of human behavior. Yet sociologists only rarely communicate with others in different Sections—let alone with