UNDERSTANDING TERRORISM:
BUILDING ON THE SOCIOLOGICAL IMAGINATION

PART ONE INTRODUCTION

PART TWO UNDERSTANDING TERRORISM

PART THREE CONNECTING THE DOTS

Part One Introduction

This volume derives from our conviction that social scientists have largely failed to follow the ideals of the scientific method in their research efforts, granting both good intentions and hard work. Specialization among the social sciences and subspecialization within each of them have yielded bits and pieces of knowledge which do not address the complexity of human behavior. For example, presently there are some forty-three Sections of the American Sociological Association whose members only rarely work to integrate all of that knowledge and apply the resulting understanding to any given human situation or problem. Worse, additional specialization within each Section has carried such narrowness much further, as illustrated by the 397 review essays in the five-volume *Encyclopedia of Sociology* (Edgar F. Borgatta and Rhonda J. V. Montgomery, eds., New York: Macmillan Reference USA, 2000), essays generally limited in cross references to other subspecialized areas.

The result of this unwillingness to confront human complexity by following scientific ideals is limited ability to understand threatening social problems like terrorism and provide the knowledge essential for making progress toward solving them. It is we social scientists who have not developed a platform of understanding which can become the basis for effective applied efforts--rather than the politicians who must work with available knowledge--who should take primary responsibility for what appear to be escalating social problems. Instead of hiding within our own narrow group of subspecialists, we must learn to reach out to a much wider range of knowledge and integrate it with what we already know. For in that direction lies not only more effective problem-solving but also more profound understanding of human behavior.

Granting our critique of current procedures within the social sciences, this volume emphasizes alternative procedures which we believe follow the ideals of the scientific method and can be applied to the full range of problems defined by social scientists. Ours is not a new kind of scientific method but rather a return to the ideals of the old scientific method, such as an effort to take into account the full range of phenomena relevant to any given defined problem by bringing comprehensive evidence to bear on that problem. Our methodology builds on earlier work within sociology and the philosophy of science--especially C. Wright Mills' *The Sociological Imagination*. Mills' definition of fundamental problems within modern society, his advice "to shuttle between levels of abstraction" of language, and his broad vision of "the sociological

imagination" yields an approach to the scientific method which does indeed address human complexity.

Our recent work has been developing for some fifteen years. It is summarized in Chapter 1, which also discusses the current nature of the Web or Part/Whole approach. It is an approach which is our effort to reconstruct the scientific method so that it can be applied effectively to human behavior. Changes in our understanding of that approach over the past six years--since the formation of the Sociological Imagination Group--have taken place in five areas. Although our overall direction has not changed, we have worked to understand the approach more fully and more systematically. Those five areas are: (1) illustrations of how the approach might be used fruitfully throughout the social sciences, including both basic and applied problems; (2) a more systematic understanding of the nature of the approach; (3) a more balanced and clearer view of Mills' advice "to shuttle between levels of abstraction" of language; (4) a more profound understanding of the role of language in relation to the scientific method; and (5) an initial perspective on the nature and impact of the social scientist's worldview or metaphysical stance on the research process. However, all of these efforts are only a start in understanding how to develop a scientific method that can in fact yield the rapid cumulative development of our knowledge of human behavior and human problems.

A summary will, of course, not do justice to the work done over a number of years that is the basis for the methodological approach developed in this volume. For further background on the Web and Part/Whole approach to the scientific method, the reader can examine Sociological Imagination Group's website:

www.uab.edu/philosophy/sig

There is Chapter 1 of Phillips' *Beyond Sociology's Tower of Babel* (2001); Harold Kincaid's Chapter 5, Explaining Inequality, in a volume edited by Phillips, Kincaid and Scheff, *Toward a Sociological Imagination* (2002); Scheff's Chapter 12, Conclusion from his in-press monograph, *Goffman Unbound;* Phillips' and Louis Johnston's Introduction from their in-press monograph, *The Invisible Crisis of Modern Society;* Phillips' paper for the 2006 conference of the Sociological Imagination Group, "Confronting the Crisis of Modern Society: The Scientific Method in Everyday Life"; David Knottnerus' paper, “Structural Ritualization Theory: Current Research and Future Developments” (presented at the Sociological Imagination Group's 2005 Philadelphia conference on education); and there's a short current bio on Mills.

This volume is based almost completely on papers given at the fifth annual conference of the Sociological Imagination Group, “The Web Approach to Terrorism: Connecting the Dots," which took place in San Francisco during the meetings of the American Sociological Association on August 14-16, 2004. None of us considered ourselves an expert on the subject of terrorism. Yet we all believed that our broad approach to the scientific method could yield insights into terrorism which specialists on terrorism had failed to uncover with their narrower methodological

orientation. Also, we were convinced that a successful conference and volume could demonstrate the utility of the Web and Part/Whole approach to the scientific method for addressing not just the problem of terrorism but--potentially--any other basic or applied problem within the social sciences.

Our earlier conferences in 2000, 2001, 2002 and 2003 were given over to exploring the nature of our methodology with no focus on any particular problem. We have come to see that methodology as a work in progress, where progress depends on our ability to demonstrate its effectiveness in achieving insight into specific defined problems, such as that of terrorism. We hope that this volume will encourage other social scientists to try out this methodology on their own problems. If it proves to be inadequate then it should be revised or abandoned. However, based on our experiences over these past fifteen years, we have come to see this approach as pointing toward what Mills called "the promise of sociology." We see it as yielding rapid cumulative development of the social sciences at a time in history when understanding of human behavior is urgently needed in the face of escalating and highly threatening problems.

It is in Chapter 1 of Part One of this volume, "The Web and Part/Whole Approach to Terrorism," that I describe--in an initial section--the origins of this approach to the scientific method and also bring this methodology up to date. And in a final section, "Applying the Web and Part/Whole Approach to Terrorism, I illustrate the approach by comparing it with recent procedures for analyzing terrorism published in a special issue of the journal, *Sociological Theory*, in March, 2004. Although there is a considerable degree of overlap between the Web and Part/Whole approach and traditional methodology within the social sciences, several sharp differences emerge. And these differences appear to be sufficient to stand in the way of the cumulative development of our understanding of terrorism. It cannot be emphasized sufficiently that we see our approach not as an alternative to the scientific method but rather as a way of learning how to use the scientific method. For we are convinced that social scientists have as yet only been able to use portions of that method in their work.

Part Two, "Understanding Terrorism," makes no claim other than that it is an initial effort in this direction of such cumulative development. The diverse contributions presented here illustrate the complexity of the phenomenon of terrorism, just as the forty-three Sections of the American Sociological Association illustrate the complexity of human behavior. Yet these chapters are all held together by a common commitment to using the Web and Part/Whole approach to the scientific method

J. I. (Hans) Bakker's "Terrorist Organizations and Agency: A Comparative-Historical Approach" employs six illustrations taking place over the past century in different societies to probe the nature of non-state terrorist organizations--by contrast with an exclusive focus on contemporary Islamic terrorism or on individual terrorists. BERNARD PHILLIPS' "Terrorism as an 'Ism':

Toward an Interactive Versus a Stratified Metaphysics" links terrorism with other isms like racism, sexism and classism, probing the metaphysical roots that underlie all such isms. ADAM RAFALOVICH'S "Assessing the Fallout of the Terrorist Moment: Anomie and the Fractured American *Weltanschauung"* looks to the phenomena of anomie and *weltanschauung* or worldview --coupled with concrete examples of terrorism--to probe the origins of terrorism. THOMAS SCHEFF'S "Runaway Nationalism: Alienation, Shame, and Anger" analyzes the social psychological basis for jingoism, seeing it as fundamental to an understanding of terrorism. JONATHAN H. TURNER'S "The Social Psychology of Terrorism" opens up to micro, meso and macro levels of analysis along with a very wide range of literature in responding to the question: "Why would individuals be willing to kill citizens of another society and, if necessary, themselves in the name of a cause?" TODD WILLIAMS'. . "Transforming Public Issues into Personal Troubles, and Back Again: The Bush Administration's Response to the Attacks of 9/11/2001" adopts a constructionist approach in arguing that administration rhetoric "played a central role in establishing the current perceptions of terrorism held by the U.S. public and policy makers," illustrated by dehumanization of the enemy and the invocation of fear.

Part Three, "Connecting the Dots," consists of two chapters--by Sandro Segre and myself--aimed at integrating key ideas from the papers in Part Two along with Chapter 1 in Part One. It is this kind of integration of wide-ranging knowledge around a particular problem which is almost invariably missing from the social science literature. And it is the lack of such integration which we see as a basis for the failure of social scientists to achieve rapid cumulative development of our understanding of human behavior in general and social problems in particular. Yet if biophysical scientists have been successful in achieving such integration and cumulative development by employing the scientific method to biophysical phenomena, there is good reason to believe that social scientists can learn to become equally successful even within the complex arena of human behavior. However, such success requires us to follow the ideals of the scientific method, and it is for exactly this purpose that we have developed the Web and Part/Whole approach.

Has our approach in fact yielded insights into the forces producing terrorism, into a direction for the rapid cumulative development of our understanding of those forces, and into a path for the rapid cumulative development of our understanding of other social problems as well as human behavior in general? That will be for the reader to assess. Yet there is a larger potential readership outside of the academic world which may have much to learn from this volume. This is the readership that C. Wright Mills appealed to in most of his books. If indeed the arguments and evidence presented here about the limitations of traditional social science methodology are correct, then this has broad implications for the rest of us. Just as the social scientist generally departs from the scientific ideal of addressing more and more of the full complexity of any given problem or situation, so do we all follow suit with a narrow view of phenomena. Just as the social scientist generally fails to see the limitations of his or her own ideas, so are we all guilty of

such *hubris.* And just as the social scientist generally remains unaware of the fundamental assumptions, worldview or metaphysical stance which shapes his or her limitations, so is that worldview also invisible to the rest of us.

More specifically, in a world where social problems appear to be increasing we cannot afford to wait for social scientists to integrate the bits and pieces of their knowledge and give us a much better basis for confronting those problems. Just as we learn to cross a busy street without thorough analyses of the behavior of every driver, so must we learn to address social and personal problems with limited understanding of their nature. But even with the present limitations of social science knowledge we may greatly improve our understanding by not being taken in by this specialized bit of knowledge or that one, following the Web and Part/Whole approach to the scientific method. Instead, that approach can enable us to integrate those bits of knowledge. Thus, we all can learn to open up to a widening range of phenomena in addressing the problems that confront us, just as the social scientist can learn to do the same.

But let there be no mistake. Proceeding very far in this direction appears to require us to challenge our fundamental assumptions or worldview, just as the social scientist must do the same. This might well demand changes that are so enormous as to parallel the change from preindustrial to modern society. And we may have no choice but either to move toward such changes or suffer the fate of civilizations of the past. In the words of Mills, we can all learn to develop a "sociological imagination." He saw that imagination as "the capacity to shift. . .from the political to the psychological; from examination of a single family to comparative assessments of the national budgets of the world; from the theological school to the military establishment." Learning to develop that imagination will require us to learn to use the most powerful problem-solving tool, based on the power of language, which we humans have developed: the scientific method. It is a method that gives us no guarantees. It is also a method that is a work in progress. But it is by far the best tool we have for confronting the incredible complexity of human behavior.

Yet far more than a long-term understanding of the complexity of human behavior is at stake at this time in history. The tragedy of 9/11 is paralleled by a far more subtle tragedy, one that would appear to be far less deadly yet may prove to be far more deadly in the long run: the tragedy of the failure of the social sciences to fulfill the promise of the Enlightenment era to place us on a path toward understanding human behavior. The problem of terrorism is one of many fundamental and intertwined problems that threaten modern society. As stated in the second paragraph of this introduction to the volume, it is we social scientists--and not anyone else--who should take primary responsibility for the current failures to address effectively the massive social problems confronting all of us. Our failure to take on that responsibility is well illustrated by our hiding within specialized areas of the social sciences and avoiding efforts to build bridges connecting the bits and piecees of our knowledge. That failure is also well illustrated by our

general lack of efforts to communicate with the public at large.

At the risk of being stereotyped as yet another messenger of doom and gloom, I am convinced that the fate of modern society is largely in our hands. Will we choose to continue conducting business as usual? Following Plato's allegory of the cave, will we prisoners in the cave watching the shadows on the wall in front of us continue to have "praise and honours from each other, and prizes for the man who saw most clearly the shadows that passed before. . ." us? Will we continue with our games of trivial pursuit? Will we continue to fiddle while Rome is burning, waiting for the bombs to fall? Or will we somehow learn to take on our responsibilities as individuals with the best opportunities to understand what is happening in the world? Will we choose the incredibly difficult task of opening up to the possibility that we are largely ignorant of the complexities of human behavior and human problems? Will we proceed, as a result, to attempt to learn how to apply the scientific method to human behavior more effectively than ever before?

Chapter 1
The Web and Part/Whole Approach to Terrorism

In this introductory chapter to the volume I shall begin with a description of what has come to be called "the Web and Part/Whole approach" to the scientific method. All of the authors within these pages begin with the premise that this approach can help the social scientist to follow the ideals of the scientific method in the analysis of terrorism or any other topic within the social sciences. This approach has been developing over some fifteen years, although its antecedents go far back in history, including analyses of physical phenomena during the 16th and 17th centuries. Following this description of the Web and Part/Whole approach to the scientific method, I will apply it to the phenomenon of terrorism. My focus will be on comparing it with the approach taken by the authors of four papers in a recent symposium on terrorism that appeared in the journal Sociological Theory. My purpose is by no means to downgrade the contributions of each of those papers in favor of the Web and Part/Whole approach. In my comparison I'm able to address only a small portion of those contributions to an understanding of terrorism. Rather, my purpose is to illustrate the nature of the Web and Part/Whole approach and show how it can add to what sociologists presently are accomplishing.

The Web and Part/Whole Approach to the Scientific Method

I had been a pre-medical student at Columbia, but classes with a most charismatic C. Wright Mills convinced me to commit to a career in sociology. As a professor of sociology at the University of North Carolina, the University of Illinois and--for the longest period--at Boston University, I was immersed in both the enormous potential of the discipline of sociology as well as the failings of sociologists to fulfill that potential. Prior to my retirement from Boston Universit--and continuing after my retirement in 1999--I had inaugurated a series of monographs at Aldine de Gruyter with the title, "Sociological Imagination and Structural Change" (d'Anjou, 1996; Busch, 2000; Moessinger, 2000; Maines, 2001; Phillips, 2001; Aho, 2002; and Houtman, 2003). The series, where Harold Kincaid joined me as co-editor at the turn of the century and which is now in the hands of Paradigm Publishers, was an effort to build on the breadth of vision which Mills had developed in his *The Sociological Imagination* (1959).

Following my retirement from active teaching in 1999, I started working on *Beyond Sociology's Tower of Babel: Reconstructing the Scientific Method* (2001), This was my effort to carry further Mills' broad approach to the scientific method. Having written a series of textbooks in research methods (1966, 1971, 1976, 1985), I had become convinced that what social scientists needed most in order to follow the ideals of the scientific method was a broader approach to methodology. For I had come to be appalled at the narrowness of the many specialized and subspecialized fields within sociology as well as the failure of sociologists in these fields to communicate with one another. Such behavior, in my view, departed from the scientific ideal of addressing the full range of phenomena relevant to a given defined problem. And that behavior also failed to fulfill the promise of the scientific method for achieving the rapid cumulative development of understanding.

At the same time, I organized an informal group of sociologists--the Sociological Imagination Group--who shared my own convictions as to the possibility of using Mills' work as a foundation for developing a methodology broad enough to deal with the enormous complexity of human behavior. I called that methodology the "Web" approach to the scientific method. It rested on a good deal of earlier work in addition to that of Mills (for example, Willer and Webster (1970); Lauderdale, McLaughlin and Oliverio, 1990; Wallerstein (1980, 1991, 1998). The group included two individuals whose work was fundamental to the new approach, Thomas J. Scheff and Harold Kincaid. Scheff had developed, during the 1990s, a "Part/Whole" methodology emphasizing the details of the momentary scene (1990, 1994, 1997). Kincaid's *Philosophical Foundations of the Social Sciences* (1996) helped me to see the Web approach as closely linked to current trends within the philosophy of science.

The group included Thomas J. Scheff, who had developed--during the 1990s--a "Part/Whole" methodology emphasizing the details of the momentary scene that complemented my own more abstract "Web" emphasis. We were joined by Harold Kincaid, a philosopher of social science who reinforced us in our ideas and helped us to develop our approach in a systematic way. For example, his own work in the philosophy of social science brought forward an earlier philosophical emphasis on the "web" of phenomena surrounding any given investigation (Kincaid, 1996; Duhem, 1954; Quine and Ullian, 1970). The group was entranced by Mills' Enlightenment vision of “the promise of sociology.” And we were not alone in our admiration for Mills' achievements. His *The Sociological Imagination* was ranked by members of the International Sociological Association as the second most influential book for sociologists published during the entire 20th century, preceded only by Max Weber’s *Economy and Society.*

The Sociological Imagination Group held its first conference in 2000 and published a volume based on that conference in 2002: "Toward a Sociological Imagination: Bridging Specialized Fields (Phillips, Kincaid and Scheff, eds.). There were ten chapters in addition to an introduction by the editors: Howard S. Becker, "The Politics of Presentation: Goffman and Total Institutions." James C. Kimberly, "Small Group Processes and the Legitimation of Societal Stratification: From Experiments to the Operation of Groups in Natural Situations," Harold Kincaid, "Explaining Inequality," Richard Lachmann, "A Critique of Pure Structure: The Limits of Rationality and Culture in the Transition from Feudalism to Capitalism," David R. Maines and David W. Britt, "Parallels and Tensions between Models and Narratives," Chanoch Jacobsen, "The Process of Secularization: Toward a Theory-Oriented Methodology," Bernard Phillips, ""Toward a Reflexive Sociology': A Second Look," and "Prejudice: The Levin Experiment," Suzanne M. Retzinger, "Alienation, Labeling, and Stigma: Integrating Social and Emotional Aspects of Mental Illness," Thomas J. Scheff, "Working Class Emotions and Relationships: Secondary Analysis of Sennett and Cobb, and Willis," and

Each of those chapters--with the exception of the final chapter by Becker, which nevertheless followed the spirit of the volume--utilized the Web and Part/Whole approach to the scientific method, but generally only to a limited extent. What follows is a current view of that method, elaborating on and extending it from its initial presentation in Chapter 1 of my *Beyond Sociology's Tower of Babel: Reconstructing the Scientific Method* (2001). At the time I did not give sufficient recognition to Thomas J. Scheff's "Part/Whole" approach, and as a result I called my orientation the "Web" approach. Nevertheless, Scheff's orientation was included, if not given sufficient emphasis, in that presentation. It was later that the orientation was re-named the Web and Part/whole approach.

The five components of the Web and Part/Whole Approach to the scientific method, as presented in the *Babel* book, are: (1) Definition of the Problem, (2) High Level of Abstraction,

(3) Low Level of Abstraction, (4) Integration of Knowledge, and (5) Reflexive Analysis and Interactive Worldview. On the surface, these headings may appear to be quite standard with the exception of "Reflexive Analysis and Interactive Worldview." For sociologists general recognize the importance of defining a problem, developing abstract theory at a high level of abstraction, testing that theory at a low level of abstraction, and thus contributing to the integration of knowledge. Granting this existence of similarities between traditional methodology and the Web and Part/Whole approach, there are substantial differences in addition to that fifth component of the latter. Generally, social scientists do not go very far within each of those four components of their methodology. Given the enormous complexity of human behavior, it becomes essential to take those four components of the scientific method far more seriously, and also to include that fifth component. Otherwise, the result is what we have already experienced: severe limitations placed on the ability of sociologists to develop their discipline cumulatively. Let us examine those components more specifically, taking into account ideas that have developed since the publication of the *Babel* book :

Definition of the Problem

Organisms, and not just human beings, are able to represent the environment and as a result perceive a problematic situation, whether the existence of a predator or--as in the case of this volume--a failure by social scientists to follow the ideals of the scientific method. We all define problems from one moment to the next. By contrast with other organisms, however, we humans can use language to help us define them. Language opens us up not only to our own past experiences but to those of others, and those experiences can help us to perceive a problem, understand its nature, and then proceed to solve it. In our everyday lives we may not be systematic, explicit or even conscious about the problems we define, but we define them nevertheless and then proceed to act on the basis of those definitions.

However, there is a substantial difference between defining a problem within the scientific method and our everyday definitions or the perceptions of other organisms, granting the importance of similarities. A scientific definition of a problem is based on written language, and thus it is out of the reach of other organisms. Further, as a result it is explicit rather than something which almost invariably is far less developed consciously. And that explicitness is the basis for the scientist's ability to build on prior knowledge. Of course, oral language does help us all to take into account past experiences, but not nearly to the same degree. Ideally, the scientist defines a problem with full knowledge of all the recorded knowledge gained by others who have wrestled with the same problem. His or her "review of the literature" becomes the basis for a definition of the problem which is the most important step of the scientific method.;

If we employ the metaphors of "head," "heart" and "hand" to refer to the scientist's ideas, feelings and actions, respectively, then the definition of the problem employs all three phenomena. The

definition of a problem is an idea about something within our experience, whether external or internal, that requires our emotional commitment and our actions to address the idea or problem that has been defined. For the scientist the focus is almost invariably on cause and effect: What are the causes of a given phenomenon? What is the impact of that phenomenon on other phenomena? For once we understand causes we may be able to move into a position to alter those causes. And once we understand a phenomenon's impact or effects, that can yield further understanding of the causes and also help us to learn about the importance of the problem that we have defined. Further, our review of the literature can give us a basis for understanding the full range of causes and effects that are involved, and our own research can add to that range.

To illustrate from the work of the Sociological Imagination Group in *Toward a Sociological Imagination: Bridging Specialized Fields* (2002), Harold Kincaid's chapter, "Explaining Inequality," begins with this sentence: "One of the more sophisticated and sustained research traditions in sociology is found in the work on stratification and occupational mobility, exemplified in the work of Blau and Duncan (1967)." Kincaid finds that Blau and Duncan do indeed build on earlier work to some extent, such as procedures for the statistical analysis and the collection of data on occupational structures in the United States from one generation to the next. In that way Blau and Duncan are indeed concerned with the existence of inequality along with some of the forces at work in causing inequality, such as patterns of social stratification.

Yet Kincaid finds that Blau and Duncan violate three criteria of a scientific definition of the problem--criteria spelled out within the Web and Part/Whole approach-- granting that they do make some progress toward such a definition. For one thing, they largely ignore the "web of background knowledge" within which all empirical testing takes place, by contrast with their narrow focus on relatively isolated and highly specialized propositions. For example, in addition to studies of stratification and mobility in the U.S. at a particular time in history, we can also look to such patterns in different countries and different eras rather than ignoring such knowledge. For another thing, they fail to employ the linguistic tools that would enable them to take into account this broad web of background knowledge, namely, moving far up and down language's levels or "ladder" of abstraction. For example, the cultural value of "equality" has become a central aspect of modern society and helps us to understand the forces opposed to inequality, yet Blau and Duncan fail to give this very abstract concept its due. Finally, Kincaid finds fault with Blau's and Duncan's failure to be "reflexive," that is, failing to develop "awareness of the historical, sociological and psychological processes influencing the research itself" (2002: 133). As a result, they fail to see the limitations of their own procedures and thus fail to help the reader see ways to improve them.

What Kincaid achieves in his analysis is nothing less than linking the problem defined by Blau and Duncan to a much broader problem, namely, the problem of how to use a scientific method to investigate any problem whatsoever. He accomplishes this by using the Web and Part/Whole

approach to uncover the limitations of traditionally narrow research procedures which fail to follow the ideals of the scientific method, such as attention to phenomena relevant to a given defined problem. Those relevant phenomena are derived from Kincaid's three criteria of a scientific definition of a problem which, in turn, invoke the Web and Part/Whole approach. "Background knowledge," levels of linguistic abstraction for attaining knowledge--including background knowledge--and knowledge of the forces associated with the research process itself are all phenomena that are relevant to understanding the problem that Blau and Duncan have defined. In his analysis Kincaid anticipates our own discussion of key elements of the Web and Part/Whole approach to the scientific method other than that of defining a problem. Yet this is necessary, since that approach is a unitary one and no element of it can be isolated from the others.

By employing the Web and Part/Whole approach to the scientific method we are able to link any defined problem to other problems, just as Kincaid linked Blau and Duncan's problem to the problem of how to use the scientific method. As a result, no defined problem can remain a relatively trivial problem, just as C. Wright Mills was able to focus on fundamental problems within modern society. That approach to the scientific method links problems to one another with the aid of abstract linguistic concepts. For example, by taking background knowledge into account the scientist can no longer remain with narrowly defined propositions within a highly specialized field but rather must learn to reach out to many other specialized fields that have relevance for the given defined problem. Knowledge within a variety of specialized fields is also involved when it comes to adopting a reflexive orientation and becoming aware of the forces affecting the research process itself. This does not imply that *all* relevant background knowledge must be employed within any given research project, for that would be asking much too much of the investigator. Rather, the Web and Part/Whole approach, following the ideals of the scientific method, simply calls for progress in this direction. That approach follows the dictum of the founder of the philosophy of pragmatism, Charles Peirce: "Do not block the way of inquiry." In this case, the path of inquiry proceeds in the direction of all of the forces relevant to a given problem.

Peirce also had something to say very directly about defining problems. He claimed that “The irritation of doubt is the only immediate motive for the struggle to attain belief. . .With the doubt, therefore, the struggle begins, and with the cessation of doubt it ends” (1877/1955: 10), In other words, the definition of a problem should involve more than the investigator's "head": "heart" should be involved as well. The problem must involve the genuine "irritation of doubt." Such a genuine feeling is fostered by linking problems with one another. In that way, a problem that might seem to be unimportant can become very important for the researcher. For example, a researcher might not be particularly interested in the causes of or impact of stratification on equality, as illustrated by the work of Blau and Duncan. But, following the work of Kincaid, when that problem comes to be seen as also involving the scientific method as it is used

throughout the social sciences, then that researcher can understand the study of social stratification as having implications for his or her own work. And that in turn can increase the "irritation of doubt" associated with the analysis of social stratification. Such emotional commitment can help to carry the investigator through the long process which is often involved in social research.

High Level of Abstraction

The Web and Part/Whole approach to the scientific method calls for the use of concepts at a high level of linguistic abstraction in order to encompass the wide range of forces involved within any given cause-effect relationships. Mills advised us "to shuttle between levels of abstraction" in his *The Sociological Imagination,* criticizing researchers who remain at a low level of abstraction. In an earlier analysis of textbooks on social problems he wrote:

> The level of abstraction which characterizes these texts is so low that often they seem to be empirically confused for lack of abstraction to knit them together. They display bodies of meagerly connected facts, ranging from rape in rural districts to public housing, and intellectually sanction this low level of abstraction. . . .Collecting and dealing in a fragmentary way with scattered problems and facts of milieux, these books are not focused on larger stratifications or upon structured wholes (1943: 166).

Mills saw the concept of social stratification as illustrating more abstract concepts which sociologists should be employing. That concept also invokes a great deal of sociological research, such as the work of Marx and Weber along with all those investigations associated with their work. One reason for sociologists' usage of a low level of linguistic abstraction is their tendency to use vernacular concepts or the concepts we use in everyday speech and thought, which appear to point toward the concrete far more than the abstract. Another reason has to do with their understanding of the scientific method as pointing toward the concrete more than the abstract. That view is itself based on a historical perspective that the scientific method emerged by contrasting its own empirical emphasis with the Church's focus on abstract ideas with no evidence to support it. Just as there is a distrust of religion, so is there also a distrust of philosophy with its lack of emphasis on concrete, empirical data. And yet another reason for an emphasis on the concrete is the dichotomous nature of language, that is, the division of all phenomena into two categories: what a given word refers to, and everything else. This teaches us to choose *either* one thing *or* another, such as *either* a high level of abstraction *or* a low level of abstraction.

My own exposure to Mills' ideas on levels of abstraction was supplemented by my contact with Alvin Gouldner, who had some things to say about the importance of going beyond vernacular concepts with all of their limitations:

> 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 (Gouldner, 1972: 16).

Gouldner does not reject the importance of ordinary language for the social scientist. It would indeed be difficult to do so, since social scientists are steeped in ordinary language no less than anyone else. But Gouldner suggests that something more is needed for social science research: what he calls "new and 'extraordinary' languages." My own exposure to such languages began just prior to having been influenced by Mills to change from a pre-medical to a sociological career. I had experienced courses in physics, chemistry and mathematics which taught me the importance of the abstract concepts which were so important in the development of those fields. As a graduate student in sociology, taking courses in the philosophy of science as well as mathematics, my exposure to concepts at a high level of abstraction continued. Later, within the process of social research, as a result of experiences as an author of two textbooks in introductory sociology (1969, 1979), and as a contributor to sociological theory (e.g., 1972, 1990), my education in the importance of abstract concepts was furthered. Following Mills' advice to shuttle up and down language's levels of abstraction, I've concluded that movement far up language's ladder of abstraction is absolutely essential for the employment of the scientific method.

If abstract social science concepts are not rejected but we move far up language's ladder of abstraction, then at some point we come up to the philosophical field of epistemology or the procedures we employ to discover the nature of reality. It is that field which is central to our concerns within this Introduction with its emphasis on the scientific method. Moving up the ladder of abstraction still further, we come to metaphysics or the nature of reality. Of course, all of language--both at lower and higher levels of abstraction--has to do with the nature of reality. But concepts at a high level of abstraction give us very general ideas which work to tie together a variety of otherwise disparate phenomena. It is here that traditional research methods in the social sciences fall short with a relatively narrow orientation and a failure to integrate knowledge. Such integration is indispensable when we take into account the enormous complexity of human behavior.

Mills wrote that “The sociological imagination enables us to grasp history and biography and the relations between the two within society” (1959: 6), thus taking into account social structures

("society"), biological and personality structures ("biography"), and the situational/historical context of any given phenomenon ("history"). More specifically, however, how is the investigator to select concepts for a particular study from among the many abstract concepts that social scientists have employed? For example, which concepts from "social structures" are to be chosen for a particular investigation? Mills emphasized "social stratification" in part because it is so central to a great deal of social research. More than that, however, is the fact that patterns of social stratification are linked to fundamental problems throughout modern society, given our emphasis on the cultural value of equality. "Culture" and "cultural values," following this example, also appear to be quite important for social science analysis. Yet if we are to follow Mills' approach, a focus on social structure is not enough if we wish to address a wide range of phenomena. The researcher must also seek "to grasp history and biography and the relations between the two within society," avoiding any temptation to define a research problem narrowly.

Low Level of Abstraction

The contrast between the situation of our knowledge prior to the scientific revolution some four centuries ago and our present situation is profound. Instead of relying on the wisdom of authorities or on our personal convictions as what is true and false, we have entered a new age of scientific knowledge. John Dewey captures the spirit of our age in a book where he attempted to reconstruct the discipline of philosophy:

> The first step [of reconstructing philosophy], a prerequisite of further steps in the same general direction, will be to recognize that, factually speaking, the present human scene, for good and evil, for harm and benefit alike, is what it is because, as has been said, of the entry into everyday and common (in the sense of ordinary and of shared) ways of living of what has its origin in physical inquiry. The methods and conclusions of "science" do not remain penned in within "science." Even those who conceive of science as if it were a self-enclosed, self-actuated independent and isolated entity cannot deny that it does not remain such in practical fact. . .The science that has so far found its way deeply and widely into thactual affairs of human life is partial and incomplete science: competent in respect to physical, and now increasingly to physiological, conditions (as is seen in the recent developments in medicine and public sanitation), **but nonexistent with respect to matters of supreme significance to man--those which are distinctively of, for, and by, man** (1948: xxvii-xxix; boldface mine).

Coming down language's ladder of abstraction, the scientist proceeds to collect evidence to test general ideas or propositions, almost invariably related to causes and effects. Concrete concepts are necessary for such testing which, in turn, will either falsify those initial propositions or support them with evidence. Dewey claims that research into physical phenomena--by contrast

with human phenomena--has been so successful in yielding knowledge that it has shaped our entire world. This has occurred not simply because of a movement by scientists down language's ladder of abstraction. Other aspects of the scientific method were involved as well. For example, scientists have had to become committed emotionally to problems they defined, or else they would have had little to sustain their work over long periods of time. Further, they have had to construct abstract concepts and propositions for the purpose of addressing the problems that they have defined. Other factors were needed as well to facilitate such behavior. For example, the development of universities gave scientists a way to sustain themselves while pursuing their investigations. The printing press helped them to learn about the research of other scientists as they proceeded to define their research problems. And explorations that were expanding knowledge of the world contributed to the scientist's belief in the possibility of making new discoveries.

Yet Dewey sees these advances in our understanding of physical phenomena as not paralleled by corresponding advances in our understanding of human behavior. Indeed, he goes very far in his indictment of the lack of such understanding. Granting that he appears to be exaggerating our ignorance in this area, how are we to explain its existence? In the very first paragraph of the introduction to this volume, the idea that social scientists are failing to "address the complexity of human behavior" was presented. Language gives us humans the opportunity to learn about, and remember, the many situations within our own past situations as well as the past situations of others, especially with the aid of devices like print, radio and television. As a result, the behavior of any human being comes to be enmeshed within a huge number of scenes that he or she has experienced directly or indirectly, and the resulting complexity of any individual thought, feeling or action becomes enormous.

Evidence for the existence of such complexity is suggested in that same first paragraph of the introduction. There are no less than forty-three--and counting--Sections of the American Sociological Association, and there are some 400 review essays on different sociological topics within the Encyclopedia of Sociology. Specialized and subspecialized studies generally do come far down language's ladder of abstraction. But that concreteness without a corresponding employment of abstract concepts is insufficient to advance our general understanding of human phenomena. Let us recall here Mills' critique of textbooks on social problems: "The level of abstraction which characterizes these texts is so low that often they seem to be empirically confused for lack of abstraction to knit them together."

One example of research that shuttles down and up language's ladder of abstraction is the chapter by Suzanne M. Retzinger in *Toward a Sociological Imagination: Bridging Specialized Fields* (2002): "Alienation, Labeling, and Stigma: Integrating Social and Emotional Aspects of Mental Illness." She focused on analyzing the transcript and LP recording of a single case. Retzinger was able to pay attention to such details as rapid condensed speech, interruptions

heavy emphasis, words that were laughed, the length of pauses and the drawing out of syllables. At the same time, however, she proceeded from an abstract theoretical framework focusing on the power of social-emotional bonds and including such concepts as alienation, normalization, conflict and secondary deviance. And her references range widely over the sociological and social psychological literatures. Research like this that proceeds so far down language's ladder of abstraction is rare. We might refer to much of the research under the banner of ethnomethodology as another illustration. Yet such research generally fails to move very far up the ladder of abstraction, by contrast with Retzinger's work.

Integrating Knowledge

Following Peirce's dictum--"Do not block the way of inquiry"--we may introduce a metaphor of a pendulum swinging in ever-widening arcs. In one direction the scientist comes to define research problems ever more profoundly and effectively. In the other direction he or she comes to make ever more progress toward solving the problem that has been defined. The pendulum, then, becomes a metaphor for a scientific method that continues to yield increasing understanding of the problems that have been defined. From this perspective, one learns to move ever further up and down language's ladder of abstraction in one's investigations, and one also learns to define problems for those investigations with ever greater comprehensiveness, profundity and clarity so as to address more and more of the phenomena linked to one's problems. The metaphor implies that we cannot move further in one direction if we fail to move further in the other direction.

We can best understand this metaphor, which helps to convey the ideals of the scientific method, by contrasting it with traditional research procedures. For one thing, social researchers apparently do not remain for many years with one general problem that they have defined, by contrast with the work of Darwin on biological evolution, with Einstein on relativity, with Marx on class conflict or with Freud on the impact of the unconscious. As a result, they move from one pendulum to another relatively quickly, without learning to swing their pendulums very far in either direction. Within contemporary social science, for example, a researcher might shift around to wherever some governmental body has funding for a particular kind of research. Alternatively, one might choose to follow the fads and fashions of the problems emphasized by the current social science literature. Or one might choose to follow a personal agenda which moves from one problem to another. In each of these orientations which fail to follow the pendulum metaphor--or, alternatively, the ideals of the scientific method--the researcher will almost invariably stay within a narrow framework, such as a quantitative versus a qualitative orientation, a focus on basic or on applied work, a high level of abstraction or a low level, or work within one narrow specialized or subspecialized field versus others.

Yet that pendulum metaphor can help the investigator build on the potential and power

within language itself, a potential that encompasses language's dichotomous, gradational and metaphorical elements. And as a result it can release the investigator from the narrow and self-imposed jail within which he or she does research. For example, qualitative research emphasizes linguistic dichotomies whereas quantitative research emphasizes gradation, and language encompasses both dichotomy and gradation. Further, movement up and down language's ladder of abstraction is a gradational journey, whereas becoming committed to solving a problem emphasizes dichotomy. In this volume, for example, we can become committed to solving the problem of terrorism, emphasizing dichotomy. Yet at the same time, we can learn to see our work as making some progress in the direction of defining this problem more abstractly and concretely. Short-term research generally emphasizes the solution of problems, invoking a dichotomous orientation. Yet Peirce's dictum--"Do not block the way of inquiry"--implicitly urges us to pay attention to long-term research, invoking a gradational orientation as well.

As for language's metaphorical potential, this has largely been ruled out of statements about the nature of the scientific enterprise, granting that investigators generally make use of metaphors to help them in understanding their work. Indeed, it would be impossible to rule out metaphors completely from any human efforts, since they are intrinsic to the way language works. Here, however, we are considering our paying explicit attention to them and emphasizing them. As for an illustration of the nature of metaphors, we are using the swinging of a pendulum as a metaphor for the scientific method. A pendulum is something quite concrete, and we can visualize its swinging quite easily. By contrast, the scientific method is quite abstract, making it difficult for us to understand it since it we cannot "see" it. Yet by equating the two--*equating a concrete phenomenon with an abstract phenomenon*--we can gain understanding of the abstract phenomenon because we learn to "see" it more clearly. Of course, we must be careful to understand that the two phenomena are not in fact identical: every metaphor is useful only to some degree. For example, if a pendulum keeps swinging in widening arcs, at some point it will swing around to the other side. Or the pendulum will have to become longer and longer if it is indeed to swing in ever-widening arcs without swinging over to the opposite side. And our use of the metaphor of the pendulum has not taken these two occurrences into account.

As another example of the utility of metaphors for understanding the nature of the scientific method, I presented "The globe metaphor for the languages of science and literature" in *Beyond Sociology's Tower of Babel* (2001: 21-23). The metaphor focused on concretizing movement up and down language's "ladder" (another metaphor) of abstraction within biophysical science, within social science, and within literature. A globe was depicted, where the equator divided the sciences (in the northern hemisphere) from literature (in the southern hemisphere). For the sciences in the northern hemisphere, the North Pole represented a high level of abstraction whereas the equator represented a low level of abstraction. And thus movement up and down language's levels of abstraction was equated to movement from the equator to the North Pole and back again.

For literature, by contrast, it was the South Pole which represented a high level of abstraction, with the equator once again representing a low level of abstraction. Thus, for literature it was movement from the South Pole to the Equator which was equated with movement from a high to a low level of abstraction. Literature was illustrated by locating Hamlet at the equator with "the indecisiveness of all human beings" closer to the South Pole. Shakespeare's concrete description of his character Hamlet, then, can help us to understand the abstract idea of human indecisiveness. Shakespeare's use of Hamlet as a metaphor equates his character with human indecisiveness, thus helping us all to see Hamlet as a way of gaining understanding of our own personal situations.

By paying explicit attention to the importance of using metaphors, the biophysical scientist as well as the social scientist can gain fuller understanding of his or her own research along with the research of others. And as a result the social scientist can learn to take into account a wider range of research, learning to see the relevance of that research for his or her own work. This in turn can help the social scientist move outside of the jail he has imposed around his own research and learn to define research problems more broadly, which will in turn enable him or her to swing the pendulum of the scientific method further in the direction of solving problems that have been defined. Thus, the social scientist can learn to utilize more fully not only language's dichotomous and gradational potential but also language's metaphorical potential. And that learning can in turn help the social scientist to communicate to other social scientists as well as to the general public the significance of research undertaken along with research results.

Once again we find that it is the potential of language itself which is central to the further development of the scientific method and, in particular, the social scientist's ability to follow the ideals of that method. Previously I had emphasized the importance of moving up and down language's levels of abstraction. We can now understand such movement as an instance of language's gradational potential. And we can also understand more fully the importance of language's dichotomous and metaphorical potentials. It is language which has worked to make the understanding of human behavior an incredibly complex enterprise. Yet it is also language which gives the social scientist and the rest of us the potential for penetrating all of that complexity. A fundamental problem which the social scientist faces is that his or her everyday usage of language and thought apparently points in the direction of dichotomous and metaphorical usages, as illustrated by the southern hemisphere of the globe metaphor as well as by the emphasis of the social sciences, rather than the gradational emphasis of the biophysical sciences with their emphasis on mathematics. In the next subsection we should gain some insight into the basis for this and what the social scientist might do to strike a better balance among language's potential for dichotomous, gradational and metaphorical usages.

Reflexive Analysis and Interactive Worldview

This fifth aspect of the Web and Part/Whole approach--"reflexive analysis and interactive worldview"--is referred to by Kincaid's analysis of Blau's and Duncan's research in the above subsection on defining problems. For Kincaid, "reflexive" analysis involves "awareness of the historical, sociological and psychological processes influencing the research itself." In other words, the scientist must not only look to his or her own personal impact on the research process but also on the full range of factors which have shaped and are shaping that process. This orientation refers to what sociologists have come to call "the sociology of knowledge.'

The contrast between this orientation and that of almost every instance of social science research--and biophysical science--is huge. To follow up on this component of the Web and Part/Whole approach, every study would have to include a second study of the research process itself. Yet it is a rare investigation within the social sciences--or the biophysical sciences as well--that even touches on such reflexive analysis or employment of an orientation to the sociology of knowledge. This situation is analogous to courtroom procedures where no cross-examinations by either the prosecution or the defense are allowed. Thus, the statements of witnesses--or in the research case, the conclusions of the investigator--are not given close scrutiny with reference to the many forces which can yield false statements. For example, an interviewee can feed an interviewer exactly what he or she wants to hear, with the interviewee learning the interviewer's desires from the questions asked or the interviewer's behavior. It is indeed strange that in a discipline like sociology with its emphasis on social interaction, the interaction between an interviewer and an interviewee is not assessed. Yet apparently other forces are involved--such as the researcher's worldview or metaphysical stance--which are not taken into account.

The question might be raised as to whether this approach leads to an infinite regress of research on the initial research process, followed by research on the study of that research process, followed by research on the research conducted on the study of the research process, and so on *ad infinitum.* Might, then, such an infinite regress yield a situation where no research whatsoever can take place because of such reflexive requirements? However, if we recall Peirce's pragmatist dictum--"Do not block the way of inquiry"--then this problem disappears. For all that we require at any point in time is some improvement over our previous understanding. We do not require perfection all at once, for--as pragmatists claim--"The best is the enemy of the better." Since presently we have almost no studies emphasizing a reflexive approach, almost any work in this direction will constitute an improvement. Of course, as we continue to learn how to do reflexive research, we will move in the direction of research on the study of the research process, and so on. But the complexity of such future developments should not get in the way of improvements in existing research procedures.

Alvin Gouldner alerted social scientists to one aspect of a reflexive approach to research, namely,

that the researcher apply social science knowledge to his or her own life and thus raise self-awareness to a higher level:

> What sociologists now most require from a Reflexive Sociology, however, is not just one more specialization, not just another topic for panel meetings at professional conventions. . .The historical mission of a Reflexive Sociology as I conceive it, however, would be to transform the sociologist, to penetrate deeply into his daily life and work, enriching them with new sensitivities, and to raise the sociologist's self-awareness to a new historical level. . .A Reflexive Sociology means that we sociologists must--at the very least--acquire the ingrained habit of viewing our own beliefs as we now view those held by others (1970: 487, 493).

Gouldner's suggestion points toward sociologists' becoming better sociologists, and that would indeed help them to do better research. Yet this only indirectly points toward the importance of emphasizing the sociology of knowledge within investigations. Such an emphasis does not require sociologists to become better sociologists through what Gouldner calls for, although that would certainly help. Gouldner's suggestion has more to do with changing the sociologist's worldview to one which is much broader, perhaps following what Mills called for with his concept of "the sociological imagination." For Gouldner's statement has to do with nothing less than the transformation of the sociologist, raising his or her "self-awareness to a new historical level."

If we look back at all of the criteria of the Web and Part/Whole approach, we can understand the importance of such a transformation. For those criteria call for the kind of research which only exists now to a very limited extent. The argument that I have made in *Beyond Sociology's Tower of Babel* (2001) in Chapters 1 and 2 is that the Web approach is itself dependent on an Interactive Worldview or metaphysical stance. I claimed that the lack of such a worldview works to prevent social scientists from following scientific ideals despite their understanding of the nature of those ideals. Of course, other factors are involved in this failure, especially the incredible complexity of human behavior. Nevertheless, movement toward an Interactive Worldview appears to be essential if indeed we wish to move toward scientific ideals, for our Stratified Worldview generally works to trump our approach to the scientific method, yielding a stratified scientific method.

Summary

In pulling together the nature of the Web or Part/Whole approach, this summary might prove helpful:

The Web and Part/Whole approach to the scientific method is an explication or reconstruction of

the scientific method inspired by C. Wright Mills' The Sociological Imagination and developed by Bernard Phillips, Thomas J. Scheff and Harold Kincaid. It points toward fulfilling the scientific ideals of taking into account all phenomena relevant to a given problem as well as achieving rapid cumulative development of understanding. It emphasizes (1) utilizing language's dichotomous, gradational and metaphorical potentials (including defining problems, shuttling up and down language's ladder of abstraction, testing propositions, integrating knowledge, and reflexive analysis), (2) adopting an interactive worldview or metaphysical stance, (3) following Charles Peirce's dictum, "Do not block the way of inquiry," and (4) assessing the approach's usefulness by means of its ability to help the user achieve increasing understanding of phenomena.

Since this summary includes a reference to an "interactive worldview," it is important to specify the nature of such a worldview or metaphysical stance. A colleague and I have developed a preliminary analysis comparing an interactive with a stratified worldview (Phillips and Johnston, 2006). That analysis will be summarized in my Chapter 4, "Terrorism as an 'Ism': An Epistemological and Metaphysical Approach." At this point, however, I might briefly refer to the nature of an Interactive Worldview as presented in that chapter:

An Interactive Worldview is a metaphysical stance or set of fundamental assumptions about the nature of reality, namely, that all phenomena affect one another directly or indirectly--versus a Stratified Worldview that they remain isolated from one another--and thus stresses the incredible complexity of all phenomena. It encompasses physical structures (e.g., interaction vs. isolation), biological structures (e.g., inward-outward perception vs. outward perception), personality structures (e.g., interactive vs. stratified beliefs, expressive orientation vs. alienation, pragmatism vs. addiction), social structures (e.g., scientific method vs. scientistic method, cultural value fulfillment vs. anomie, egalitarian social relationships vs. social stratification), and the situation, including a historical orientation (e.g., reflexive behavior encompassing the sociology of knowledge vs. labeling, positive reinforcement vs. negative reinforcement, praxis vs. conforming behavior).

Chapter 4 together with the book it summarizes (Phillips and Johnston, 1966) no more than begin to open the door on a subject that I believe is absolutely vital for social scientists if they wish to follow scientific ideals. For a metaphysical stance or worldview is sufficiently powerful so as to trump departures from scientific ideals. The comprehensiveness of an Interactive Worldview follows directly Gouldner's call for a reflexive sociology as well as an orientation to the importance of the sociology of knowledge. That breadth also follows directly Mills' call for the development of a "sociological imagination." Further, it follows Enlightenment ideals which we have yet to learn how to fulfill.

Prior to applying the Web and Part/Whole approach to the phenomenon of terrorism, it

may be useful to indicate how the approach as described here differs from its earliest statement in *Beyond Sociology's Tower of Babel* (2001). That difference is by no means a change in the fundamental nature of the approach but rather is a more detailed specification along with an emphasis on certain of its aspects. Perhaps the most important change is an emphasis on the nature of the interactive worldview and the stratified worldview, a contrast which had been indicated in the *Babel* book. It is one's metaphysical stance which shapes one's ability to follow the scientific ideals that are the basis of the Web and Part/Whole approach. The above definition of an interactive worldview provides hints as to the nature of these worldviews. Our understanding of worldviews has implications not just for the problem of terrorism but for the full range of social problems as well as the full range of research in the social and biophysical sciences.

Another change has been the altered designation of this method from "the Web approach" to "the Web and Part/Whole approach," giving greater emphasis to the work of Thomas J. Scheff in his development of the "Part/Whole approach (1990, 1994, 1997). Scheff's detailed analysis of the momentary scene--the "Part" section of his approach--is illustrated by his chapter in the volume, *Toward a Sociological Imagination: Bridging Specialized Fields* (Phillips, Kincaid and Scheff, eds., 2002): Chapter 10, "Working Class Emotions and Relationships," 263-290). It is also illustrated by the chapter in the same volume written by his wife and colleague, Suzanne M. Retzinger, Chapter 9, "Alienation, Labeling, and Stigma," 229-260. The *Babel* book did emphasize the importance of moving down language's ladder of abstraction, and it did contain an illustration of this procedure deriving from the work of Retzinger and Scheff. But movement far down language's ladder of abstraction is no less important than movement far up that ladder, and changing the name of our approach helps to yield appropriate emphasis to such movement.

Yet another change is an emphasis on the linguistic basis for the Web and Part/Whole approach. The above definition indicates the importance of learning to make use of language's "dichotomous, gradational and metaphorical potentials." A discussion of those elements of language is to be found in the *Babel* book, but this new emphasis has led to clarification of just how a concern with epistemology and metaphysics is important. If we move up language's "ladder" of abstraction gradationally, then at some point we come to epistemology and then, still higher on that ladder, we come to metaphysics. And as we move down that ladder we come to an analysis of the situation, and that analysis should also include what can be perceived within the situation, just as Scheff and Retzinger emphasize the importance of perception. As a result, then, of giving language such a central role in the development of the scientific method, we are integrating the two most powerful tools that the human being has invented: language and the scientific method. And we are also paying attention to perhaps the most important discovery of the social sciences during the entire 20th century: the central role of language in human behavior.

Another change is a greater emphasis on a systematic way of understanding the Web and

Part/Whole approach. Somehow I had thought that my *Babel* book did this job, but on re-reading it I find that it is strong on illustrations but weak on systematic presentations. It is here that Kincaid's earlier work (1996) and his later suggestions with respect to the manuscript on worldviews (Phillips and Johnston, 2005) proved to be most helpful. The above definitions of the Web and Part/Whole approach as well as an Interactive Worldview--along with the above description of the approach--convey examples of a more systematic orientation. For example, the former definition of this methodology brings in the importance of Peirce's dictum--"Do not block the way of inquiry"--which suggests the importance of continually developing the approach. That definition also specifies the importance of assessing the approach on the basis of its fruitfulness for research. In this way, to be supplemented in the following section of this chapter comparing the approach to traditional methodology, we gain a clearer understanding of just how it differs from and is similar to contemporary research throughout the social sciences. It is a lack of such understanding which has stood in the way of the potential impact of the Web and Part/Whole approach on social scientists.

One more change has to do with the research which the Web and Part/Whole approach has helped to generate. An example is the volume, *Toward a Sociological Imagination: Bridging specialized Fields* (Phillips, Kincaid and Scheff, 2002), which includes work by ten authors. Other examples are the present volume, Scheff's new monograph (2006) and my monograph with Louis Johnston (2006). Yet all of this is no more than a small beginning, especially when we compare it to the thousands of researches based on traditional methodology. What I believe is called for is new research which clearly demonstrates the utility--or lack of utility--of the Web or Part/Whole approach throughout the social sciences.

Applying the Web and Part/Whole Approach to Terrorism

Roberta Senechal de la Roche of the Department of History of Washington and Lee University organized a symposium on terrorism published in *Sociological Theory* “to encourage and strengthen” the new attention to terrorism, “especially its theoretical dimension” (2004: 1), following the 9/11 attacks, From among the papers published, I shall examine four of them which can help us to better understand the Web and Part/Whole approach. By so doing I attempt to bring out and integrate at least some of the contributions each of these papers makes to our understanding of terrorism. I also intend to bring out some of the limitations of these papers in addressing the complexity of the phenomenon of terrorism, at least relative to the directions taken by the Web or Part/Whole approach. The promise of this approach is that it is comprehensive enough to help us integrate social science findings. And by so doing, we can build a platform of knowledge of human behavior that can facilitate both the rapid cumulative development of further knowledge as well as the use of that platform as a springboard for solving problems.

I will proceed initially by presenting each author's abstract of his paper. I will then attempt to pull together the contributions of all of the papers to an understanding of terrorism. Following this, I will indicate what I believe to be the limitations of these papers relative to efforts to integrate our understanding of terrorism. In all of this I will be guided by the Web and Part/Whole Approach to the scientific method. The entire exercise is designed to clarify the nature and potentials of that approach, and the reader will be in a better position to assess it as a result.

Abstracts

DONALD BLACK: "The Geometry of Terrorism," *Sociological Theory* 22 (March 2004), 14-25.

> Terrorism in its purest form is self-help by organized civilians who covertly inflict mass violence on other civilians. Pure sociology explains terrorism with its social geometry—its multidimensional location and direction in social space. Here I build on the work of Senechal de la Roche (1996) and propose the following geometrical model: Pure terrorism arises intercollectively and upwardly across long distances in multidimensional space. Yet because social distance historically corresponded to physical distance, terrorism often lacked the physical geometry necessary for its occurrence: physical closeness to civilians socially distant enough to attract terrorism. New technology has made physical distance increasingly irrelevant, however, and terrorism has proliferated. But technology also shrinks the social universe and sows the seeds of terrorism's destruction (Black, 2004: 14).

CHARLES TILLY: Charles Tilly's "Terror, Terrorism, Terrorists," *Sociological Theory* 22 (March 2004), 5-13.

> The terms terror, terrorism, and terrorist do not identify causally coherent and distinct social phenomena but strategies that recur across a wide variety of actors and political situations. Social scientists who reify the terms confuse themselves and render a disservice to public discussion. The U.S. government's own catalogs of terrorist events actually support both claims (2004: 5).

ALBERT J. BERGESEN AND OMAR LIZARDO: Albert J. Bergesen's and Omar Lizardo's "International Terrorism and the World-System," *Sociological Theory* 22 (March 2004), 38-52.

> Theories of international terrorism are reviewed. It then is noted that waves of terrorism appear in semiperipheral zones of the world-system during pulsations of

> globalization when the dominant state is in decline. Finally, how these and other factors might combine to suggest a model of terrorism's role in the cyclical undulations of the world-system is suggested (2004: 38).

ANTHONY OBERSCHALL: Anthony Oberschall's "Explaining Terrorism: The Contribution of Collective Action Theory," *Sociological Theory* 22 (March 2004), 26-37.

> Terrorism is an extreme, violent response to a failed political process engaging political regimes and ethnic and ideological adversaries over fundamental governance issues. Applying the theory of collective action, the author explains the dynamic of violence escalation and persistence. Recent Islamist terrorism stems from the conviction that a theocracy is the only answer to the multiple problems of Middle Eastern and Muslim countries. Checks on terrorism result both from external social control and from the internal contradictions of theocratic states (2004: 26).

Contributions

In my view, based on the Web and Part/Whole approach, each of these papers makes important contributions to our understanding of terrorism. I'm not simply claiming this to give balance to negative assessments, for I'm convinced that all of these papers make significant contributions to our understanding of terrorism. However, the Web and Part/Whole approach--by contrast with the orientation of each author--makes it possible for us to integrate all of those contributions. To clarify an author's convergence with that approach, I will use boldface to specify an author's contributions that utilize an aspect of the Web and Part/Whole approach. Yet this analysis is severely limited in that those contributions can be no more than illustrated in this short chapter, and the reader should go back to the original articles for a much better understanding of them.

Black's "The Geometry of Terrorism" alerts us to the enormous dangers from terrorism associated with historical improvements in technology's ability to yield powerful chemical, biological and nuclear weapons of mass destruction. By so doing, he helps us to understand the threats that acts of terrorism pose at this time in history. He achieves this insight by taking into account both the **history** of technology as well **physical structures** such as the ease of bridging the distance between terrorists and their civilian targets. Black also makes use of one aspect of **social stratification** through his view of the causes of terrorism as linked to the "social distance" between terrorists and their victims, as illustrated by patterns of inequality. By contrast with most individual criminal acts which have no orientation to changing **social structures**, terrorism is a **group** activity oriented to the social control of forces in society which perpetuate the social distance experienced by terrorists. For example, "An aggrieved group. . .threatens violence until the enemy (usually a nation-state) complies with a longstanding demand . . .such as political

independence, lost territory, or a customary way of life."

Tilly's major focus in his "Terror, Terrorism, Terrorists" is on the dangers of adopting vernacular or everyday concepts like "terrorism" in efforts to understand the phenomena under examination, thus emphasizing the centrality of the **language** we use in our effort to employ **the scientific method.** He states at the end of his article: "Terrorists range across a wide spectrum of organizations, circumstances, and beliefs. Terrorism is not a single causally coherent phenomenon. No social scientist can speak responsibly as though it were." Implicitly, Tilly appears to be criticizing several aspects of a **stratified worldview.** For one thing, there is **conformity** to political leaders who use the concept of terrorism. It is those leaders who move into a **stratified** position relative to the rest of us. Those leaders want social scientists to focus on networks of terrorists who are independent of government. Yet social scientists should by no means ignore state-sponsored or government-sanctioned terrorism. Among other things, Tilly is arguing for the **complexity** of the phenomenon of terrorism.

Bergesen's and Lizardo's "International Terrorism and the World System" focuses on "violence by a nonstate group to obtain a political, religious, or social objective through fear and intimidation directed at a large audience," thus looking to small **social structures** and emphasizing their **subcultural values.** The focus on "fear" implies an effort by terrorists to gain status, or a higher **stratified** position over their enemies. The authors recognize different examples of terrorism, thus opening up to the **complexity** of behavior: at the individual level, focusing on **personality structure**, at the **group** or social movement level, and at the national level, dealing with large **social structures.** They emphasize world-systems theory with its orientation to **international social stratification** as well as **history.** They put forward a proposition, tested partly by instances of terrorism in earlier periods, that terrorism occurs when a dominant state is in decline, thus emphasizing both **history** and **international stratification**. Yet for all of their analysis, they reserve their final remarks for an emphasis on our present limited understanding of terrorism, thus emphasizing **Peirce's dictum** pointing to the importance of future research: "The exact link[s] between hegemonic decline and waves of terrorism are not understood fully. . .it seems like not much is known about waves of terrorism."

Oberschall's "Explaining Terrorism: The Contributions of Collective Action Theory" focuses on **group** violence or the activities of small-scale versus national **social structures,** by contrast with criminal behavior by individuals or the actions of states. He builds explicitly on theories within the sociological literature on social movements, thus focusing on propositions at a relatively **high level of abstraction**. He sees four factors as required for terrorist outbreaks: "(1) discontent, (2) ideology-feeding grievances, (3) capacity to organize, and (4) political opportunity." Discontent must be widespread, suggesting the importance of **cultural values** which remain unfulfilled. Ideology serves to define the enemy, legitimizing terrorist actions on the basis of those unfulfilled values, and apparently suggesting a **stratified worldview** associated

with that ideology. The ability to organize is no minor factor, and this might involve **personality structures** with the ability to exercise leadership. Political opportunity refers to what is happening in **history**, as illustrated by Bergesen's and Lizardo's thesis that terrorism may occur when a dominant state is in decline.

Limitations

In examining the limitations of these articles relative to the ideals of the scientific method--or the Web and Part/Whole approach to the scientific method--I must note that any study, including those in this volume, can be found wanting in this respect. And as we have seen above, studies often have much to contribute in their progress toward those ideals. However, in my own view such contributions will remain self-limiting--and studies will as a result continue to fail to achieve the rapid cumulative development of knowledge--unless we measure them against a yardstick which applies Peirce's dictum to methodology itself. And such a yardstick, whether or not it is based on the Web and Part/Whole approach, must move far up language's ladder of abstraction to invoke not just methodology or epistemology but also the worldview or metaphysical stance that is involved within a given study.

Despite all of their contributions, each of these studies is narrow in its own ways. We can see this in that--granted some overlap among the studies--each one generates ideas that generally fail to include insights from the others. For example, Black's emphasis on physical structures is not shared by any of the other authors. Conversely, the concerns of the others with the goals of terrorists, at least implicitly, is not shared by Black. Black illustrates a limited perspective with these words: "Pure sociology. . .ignores the contents of the human mind, such as thoughts and feelings, and is entirely free of psychology. It also ignores human goals or ends, whether of persons or groups
. . .".

As another example, Tilly writes about the importance of not necessarily giving any credibility to the use of the vernacular. Yet all of the authors, including Tilly, use the vernacular almost exclusively in making their arguments. We generally fail to see in the author's arguments any emphasis on concepts like "social structure," "social organization," social stratification," "culture," "cultural values," "alienation," "anomie," "social relationship" and "conforming behavior," concepts that have been fundamental to the development of sociology.

That failure to build on the concepts of sociology also speaks to another failure: a lack of sufficient attention to the potentials offered by language. We might recall here a key characteristic of the Web and Part/Whole approach: utilizing language's dichotomous, gradational and metaphorical potentials. That characteristic also has to do with movement far up and down language's ladder of abstraction, testing propositions, integrating knowledge and

reflexive analysis. How can we social scientists possibly further our cumulative knowledge on any problem whatsoever--whether substantive or applied--if we continue to largely ignore the key ideas that have gone before us? This behavior is very far from what we find among the biophysical sciences, granting the much greater simplicity of biophysical phenomena. Each of us somehow feels perfectly free to invent his or her own universe of concepts, ignoring the idea that the scientific enterprise is based on the work of a community of scientists, and that such a community is invoked largely through the use of key concepts from the social sciences. It is language which is the human being's central discovery for solving problems, yet social scientists generally attempt to employ a scientific method that fails to build on language's enormous potentials.

Yet another limitation of these studies has to do with Peirce's dictum: "Do not block the way of inquiry." Of course, no author directly claims that he has the final answers to the problem, for that would be far too obvious a violation of the scientific method's commitment to that dictum: a lack of commitment appears in more subtle ways. One way has already been suggested in the above paragraph: by paying little or no attention to previous concepts well developed within the sociological literature, sociologists block the way to inquiry, for that way is paved with those concepts. Further blocks may be seen in the authors' final paragraphs, where they refer or fail to refer to further research that might be needed. In his final paragraph Black not only fails to refer to future research but he also uses the terms "inexorably" and "inevitable" in advancing his argument for the self-limiting nature of terrorism: "The intermingling of peoples and cultures, technologically and otherwise, inexorably destroys the differences now polarizing populations and collectivizing violence. . .its [terrorism's] inevitable fate is sociological death." Oberschall does not refer, in his final paragraphs, to future research that is needed, nor does Tilly. To their credit, Bergesen and Lizardo do emphasize our present lack of knowledge of terrorism, implying the importance of future research. Yet they point solely toward further development of world-systems theory and data, failing to open up to other research that might be needed.

Two aspects of the scientific method that are explicated or reconstructed by the Web and Part/Whole approach and that are missing from all of these papers are a reflexive approach that encompasses the sociology of knowledge and a commitment to an interactive worldview or metaphysical stance. Both of those aspects of the scientific method are in turn linked to an emphasis on language's gradational potential, which can take the scientist far up language's ladder of abstraction to the ethereal realms of epistemology and metaphysics. Yet we have seen the lack of attention to language in these studies, with the exception of Tilly's treatment of the limitations of vernacular language, but with no direction for an alternative. Granted that Bergesen and Lizardo, as well as Tilly, do emphasize the enormous complexity of the problem, their emphasis stops there, for they fail to point up the deficiencies of our epistemological and metaphysical assumptions which do not help us to penetrate that complexity.

The authors' failure to take into account the importance of our worldview or metaphysical stance is further illustrated by their "outward perception" versus "inward-outward perception" of the problem of terrorism. So long as we continue to see terrorism as foreign to our own behavior, we will fail to see how our own stratified actions contribute--if only to some degree--to terrorism. Following Walt Kelly's Pogo, we have met the enemy, and they are us, or at least they are us to some degree. This is not a question of blaming the victim, since we need not abandon the idea that our own hierarchical behavior is by only one component influencing terrorist behavior. From this perspective, countering terrorism can work not only to protect ourselves from terrorists but also to help us move out of a stratified worldview that constrains not only our research ability but also our very ability to close our own gaps between cultural expectations and their fulfillment. And this can strengthen our motivation to fight terrorism, for this becomes a fight for our own development as well.

Moving beyond this chapter to the volume as a whole, the authors hope to continue to illustrate what the Web and Part/Whole approach to the scientific method can accomplish for the social scientist. It is an approach that is by no means largely new to most readers, for it takes up the ideals of the scientific method that have widespread approval. What is new, however, are procedures which help the social scientist to move ever closer to those ideals. By so doing, we hope to penetrate ever more deeply into the complexity of human behavior. If indeed we authors are successful in our efforts, then we will be laying out a path which any reader can follow in exploring any substantive or applied problem whatsoever. If we are not successful, we hope that readers will be motivated to find an alternative path which will take them ever closer to penetrating human complexity. In either case, we are convinced that following such a path is not only essential for the further development of the social sciences. We believe it is essential for the very survival of modern society as we know it.

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