Paradigms Lost and Pragmatism Regained

Methodological Implications of Combining Qualitative and Quantitative Methods

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This article examines several methodological issues associated with combining qualitative and quantitative methods by comparing the increasing interest in this topic with the earlier renewal of interest in qualitative research during the 1980s. The first section argues for the value of Kuhn's concept of paradigm shifts as a tool for examining changes in research fields such as social science research methodology. The next two sections consider the initial rise of the "metaphysical paradigm" that justified the renewed interest in qualitative research and the subsequent problems that have encouraged efforts to replace that paradigm. The final section of the paper advocates a "pragmatic approach" as a new guiding paradigm in social science research methods, both as a basis for supporting work that combines qualitative and quantitative methods and as a way to redirect our attention to methodological rather than metaphysical concerns.

Keywords: paradigms; pragmatism; research methodology

For the past two decades, much of the discussion in social science research methods has focused on the distinction between *Qualitative Research* and *Quantitative Research*. Note that I have capitalized these two terms to distinguish them from the more technical issues dealing with *qualitative* and *quantitative methods*. This also heightens the contrast between these two dominant approaches to social science research and the current alternative approach, which—depending on the language you prefer—either combines, integrates, or mixes qualitative and quantitative methods. This leads to the following question: To what extent is combining qualitative and quantitative methods simply about how we use *methods*, as opposed to raising basic issues about the nature of research *methodology* in the social sciences?

My answer to that question begins with an examination of the current state of social science research methodology and its history over roughly the past 25 years. My approach thus amounts to analyzing the recent history of social science research methodology through the interdisciplinary perspective known as "science studies" or "social studies of scientific knowledge" (Hess, 1997; Jasanoff, Markle, Peterson, & Pinch, 1995; Zammito, 2004). From this point of view, if we want to examine the issues raised by a new approach

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such as combining qualitative and quantitative methods, we must start by examining the "dominant paradigm." Hence, rather than assessing any new approach strictly on its own merits, the implications of that approach must be considered within an ongoing context where researchers have preexisting commitments to other systems of beliefs and practices. Within the science studies, the consensual set of beliefs and practices that guide a field is typically referred to as a "paradigm."

Paradigms have also become a central concept in social science research methodology, but often with a meaning that is rather different from the way that term is used in the field of science studies. To sort out the multiple meanings and uses of the word *paradigm*, the next section of this article summarizes the four most common versions of this term as it is found within the social sciences, as part of a brief overview of the sociology of science approach that will guide the article as whole. The second section will use that conceptual framework to review developments in social science research methodology as a field of studies over the past 25 years. The third section then considers the methodological issues raised by combining qualitative and quantitative methods and compares them to the currently dominant approach. Finally, the Conclusions section considers what it might mean to go beyond the recent interest in combining methods as a practical approach to research design and apply this shift in research practices to several key issues in social science research methodology.

Rather than treating this presentation as a mystery or suspense novel, where the reader has to search out clues to anticipate conclusions that the author reveals only at the end, let me give a quick preview of the key points that I will make in each of those sections. First, I will argue for a version of paradigms as systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them. In addition, I will contrast that version of paradigms to the currently widespread version in social science methodology, which emphasizes metaphysical issues related to the nature of reality and truth.

In the second section, I trace out the rise of this "metaphysical paradigm" in social science research methodology. In doing so, I will concentrate on the advocacy efforts of a set of researchers who promoted this view as a replacement for what they considered to be an outmoded "positivist paradigm." My summary of these events draws on typical "case study" techniques from science studies to make a case that the increasing acceptance of this metaphysical paradigm from the 1980s onward led to not only a widespread acceptance of qualitative methods but also a broader reconceptualization of methodological issues throughout the social sciences. In the third section, I contrast that metaphysical paradigm to basic beliefs and practices involved in combining qualitative and quantitative methods, and in the fourth section, I propose what I call a "pragmatic approach" as an alternative to the previous paradigm. Just as the debate between the positivist and metaphysical paradigms in the 1980s was about more than just research methods, a shift from the metaphysical paradigm to a pragmatic approach also raises much larger questions about how we do research in the social sciences. Finally, the Conclusions section outlines what I see as some of the most interesting and promising issues that a pragmatist approach would offer for future directions in social science research methodology.

This is obviously an ambitious and controversial agenda, and I must confess a certain hesitation in laying out these ideas because I have only minimal training in science studies and even less in the history of science as a specialized field. Hence, I want to be clear that what follows makes no attempt to be a *definitive* analysis of changes in the field of social science

research methodology over the past several decades. Nor is it an exhaustive summary of the major historical events and documents in that period. Nonetheless, I hope that you, as an audience that includes many social science research methodologists, will find my account of past events credible and my suggestions for future directions worth considering.

Alternate Applications of the Paradigm Concept in Social Science Methodology

Thomas Kuhn's landmark book, *The Structure of Scientific Revolutions* (1962/ 1996), is directly responsible for the popularity of paradigms as a way to summarize researchers' beliefs about their efforts to create knowledge. A chief source of difficulty, however, is the great breadth of Kuhn's uses for his concept of paradigms, and one friendly critic (Masterman, 1970) claimed to have located more than 20 ways that Kuhn used the term his book. Kuhn (1970) responded to this lack of clarity about the meaning of paradigms by discussing this issue at length in a "Postscript" that he added to the later editions of his book (see Kuhn, 1974, for a similar set of arguments).

In hindsight, Kuhn wished that he had used a different term like *disciplinary matrix* to summarize the various forms of group commitments and consensus that we now associate with paradigms. He himself never actually adopted the term *disciplinary matrix*, however, and even though his later work (e.g., Kuhn, 2000) tended to avoid references to *paradigms*, that word and all its variant meanings is now a central concept in scholarly work. As a result, it is all too easy for social scientists to talk about "paradigms" and mean entirely different things. For example, after J. Patton (1982) spoke of the value of making "mind shifts back and forth between paradigms" (p. 190), Schwandt (1989) complained that it was unclear how "such an astonishing feat is to be accomplished" (p. 392). Yet J. Patton was referring to paradigms as frameworks for thinking about research design, measurement, analysis, and personal involvement (what I refer to below as "shared beliefs among members of a specialty area"), whereas Schwandt referred to paradigms as "worldviews" and beliefs about the nature of reality, knowledge, and values (a mixture of the two versions of paradigms I call "worldviews" and "epistemological stances").

I will review four basic versions of the paradigm concept, as shown in Table 1. All four versions treat paradigms as shared belief systems that influence the kinds of knowledge researchers seek and how they interpret the evidence they collect. What distinguishes the four versions is the level of generality of that belief system. Hence, the following descriptions move from the most general to the most specific versions of paradigms, along with a discussion of the relevance of each version for questions about combining qualitative and quantitative methods.

Paradigms as Worldviews

This broadest version treats paradigms as worldviews or all-encompassing ways of experiencing and thinking about the world, including beliefs about morals, values, and aesthetics. Although this was not one of the versions that Kuhn (1970) explicitly discussed in his Postscript chapter, it shows up quite frequently in the social sciences. For example, Rossman

Table 1
Four Versions of Paradigms

	Paradigms as Worldviews	Paradigms as Epistemological Stances	Paradigms as Shared Beliefs in a Research Field	Paradigms as Model Examples
Defining characteristics	All-encompassing perspectives on the world	Ontology, epistemology, and methodology from philosophy of knowledge	Shared beliefs about the nature of questions and answers in a research field	Relies on specific exemplars of best or typical solutions to problems
Place in Kuhn's work	Implicit	Directly discussed but not favored	Directly discussed and favored	Directly discussed and favored
Place in social sciences	Common as nontechnical usage	Currently dominant version	Relatively uncommon	Largely absent
Advantages	Recognizes role of personal experience and culture in science	Relies on well-known elements from philosophy of knowledge	Can be studied by examining the work of actual researchers	Very explicit, concrete
Disadvantages	Too broad, little direct relevance to research	Broad approach to knowing, less direct connection to research	Usually describes smaller research groups, not whole disciplines	Very narrow, limited applications
Place in combining methods	Little explicit use	Major impact	Minor impact	Little explicit use

and Rallis's (2003) text on qualitative methods highlighted "worldviews" and "shared understandings of reality" as synonyms for paradigms (p. 36), whereas Creswell (1998) began his discussion of the concept by noting, "Qualitative researchers approach their studies with a certain *paradigm or worldview*, a basic set of assumptions that guide their inquiries" (p. 74). Similarly, Lincoln (1990) described paradigms as alternative world views with such pervasive effects that adopting a paradigm permeates every aspect of a research inquiry. As the previous example of the disagreement between J. Patton (1982) and Schwandt (1989) illustrates, problems arise if one simply stops at the broad sense of a paradigm as a worldview, without carefully specifying the elements that are contained within that worldview. It thus does little good to think of paradigms as worldviews that include virtually *everything* someone thinks or believes; instead, it is important to clarify what is contained in a worldview, which in this case would primarily focus on a person's thoughts about the nature of research.

Making the connection between paradigms as worldviews and issues surrounding the combining of qualitative and quantitative methods points to the many factors that go into decisions about what to study and how to do such a study. For example, some researchers emphasize issues of social change and justice, whereas others concentrate on testing or creating theories in their specific fields. These kinds of preferences point to the influence of individual worldviews on the topics researchers choose to study and how they choose to conduct that work. Such worldviews do little, however, to help us understand issues such as why combining qualitative and quantitative methods has become both more popular and more controversial within social science research over the past decade or so.

Paradigms as Epistemological Stances

The next version of paradigms treats the best known epistemological stances (e.g., realism and constructivism) as distinctive belief systems that influence how research questions are asked and answered and takes a narrower approach by concentrating on one's worldviews about issues within the philosophy of knowledge. This is one of the three major versions of the paradigm concept that Kuhn discussed in his 1970 Postscript, and it is also the most widespread version within social science research methodology. This approach builds on the insight that research inherently involves epistemological issues about the nature of knowledge and knowing. In particular, treating realism and constructivism as paradigms points to broad differences in social scientists' assumptions about the nature of knowledge and the appropriate ways of producing such knowledge (e.g., Guba & Lincoln, 1994, 2005). Once again, however, the breadth of this version of paradigms is also a limitation. Although paradigms as epistemological stances do draw attention to the deeper assumptions that researchers make, they tell us little about more substantive decisions such as what to study and how to do so.

With regard to combining qualitative and quantitative methods, paradigms as epistemological stances have had a major influence on discussions about whether this merger is possible, let alone desirable. This influential role in discussions about combining methods is not surprising, given the dominance of this version of paradigms in current social science research methodology more generally. Thus, Tashakkori and Teddlie (2003) relied on this version when they distinguished between approaches based on "paradigm incompatibility," which asserts that the conflict between Qualitative and Quantitative Research is so fundamental that it is impossible to combine them, and other approaches that claim it is possible to combine qualitative and quantitative methods without violating philosophical principles.

Although Tashakkori and Teddlie did treat the paradigm incompatibility approach as "largely discredited" (p. 19), the mere fact that they organized much of their discussion around this approach continues to give it a life of its own. These issues will be a core topic in the next section of this article, but for now it is important to note that they are all based on a version of paradigms that emphasizes epistemological stances.

Paradigms as Shared Beliefs Among Members of a Specialty Area

At the next level of specificity is a version of paradigms as shared beliefs within a community of researchers who share a consensus about which questions are most meaningful and which procedures are most appropriate for answering those questions. This is the version of paradigms that Kuhn (1970, 1974) himself preferred, and it is the most common form in the fields that make up science studies, but it has received limited attention in discussions of social science methodology. When this version has appeared in the social sciences, it has typically been applied to whole disciplines, such as nursing (Newman, 1992) or sociology (Ritzer, 1975). Although Kuhn (1996) explicitly acknowledged that this version of paradigms could be applied to the broader assumptions that guide whole disciplines, he himself emphasized the more specific beliefs and practices shared within "research communities" consisting of "practitioners of a scientific specialty" with "perhaps one hundred members" who are "absorbed in the same technical literature" (pp. 177-178). Kuhn's emphasis on paradigms as governing "not a subject matter but a group of practitioners" (p. 180) has been a source of frustration for those who wish to characterize the paradigmatic assumptions of whole disciplines or the even the social sciences as a whole. Yet it has also served as a guiding insight for empirical work in science studies, which has concentrated on case studies of the changes in beliefs and practices that occur in specific subfields and the consequences that these smaller "paradigm shifts" may have for the larger fields in which those research specialties are embedded (e.g., Collins & Pinch, 1998).

With regard to combining qualitative and quantitative methods, this concept of paradigms as shared beliefs among a community of researchers has had considerably less impact than the epistemological stance version described above. Yet if we consider social science research methodology as the kind of specialty area that Kuhn described, then it makes sense to examine the shifts in our own beliefs and practices about how to do research. In particular, the past two decades have seen a rise in the legitimacy of Qualitative Research, which has been justified through an emphasis on the contrast between epistemological stances such as realism and constructivism. More recently, however, work on combining qualitative and quantitative methods has emphasized a largely pragmatist stance. These shifts within the field of social science research methodology, and their larger implications for social science research in general, are a central topic in this article.

Paradigms as Model Examples of Research

The final and most specific version of paradigms treats them as model examples that serve as "exemplars" for how research is done in a given field. This usage is most familiar in the form of "paradigmatic examples" that show newcomers how a field addresses its central issues. Although this version of paradigms was of special interest to Kuhn himself, it

has received relatively little attention in subsequent work, and I have included it here largely for reasons of completeness. It does, however, have some relevance to the topic of combining qualitative and quantitative methods, simply because so many of the books and articles in this field rely on concrete examples to illustrate the broader principles they propose. This use of research projects as case studies that serve as paradigmatic examples is particularly common in descriptions of designs that combine multiple methods (e.g., Creswell, Plano Clark, Guttman, & Hanson, 2003; Morgan, 1998, 2006, in press). In addition, this version of paradigms is relevant to work that demonstrates the value of combining methods in a specific research area by summarizing noteworthy examples from that field (e.g., Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005; Happ, Dabbs, Tate, Hricik, & Erlen, 2006; Neal, Hammer, & Morgan, 2006). That type of article is likely to become more common as this approach gains popularity.

Ultimately, it helps to think of these four increasingly specific versions of paradigms as nested within each other. The model examples researchers use to demonstrate the key content of their field reflect a set of shared beliefs about both the research questions they should ask and the methods they should use to answer them. Shared beliefs about research topics and methods are, in turn, based on epistemological stances that summarize researchers' assumptions about what can be known and how to go about such knowing. And at the broadest level, assumptions about the nature of knowledge and reality are an important component of each researcher's worldview.

This hierarchy from specificity to generality demonstrates that these four versions of the paradigm concept are not mutually exclusive. Nor is one of them right and the others wrong. Instead, the question is which version is most appropriate for any given purpose. In the present case, I will use the version of paradigms as "shared beliefs among the members of a specialty area." My reasons for relying on this version of paradigms matches the goal of examining shifts within the field of social science methodology and the broader effects of those changes on social science research in general. This goal is directly related to Kuhn's famous distinction between "normal science," where researchers agree about which problems are worth pursuing and how to do so, versus "scientific revolutions" that call these assumptions into question.

The next two sections thus examine the recent history of paradigms in social science research methodology, including prolonged periods of agreement about both its central problems and the appropriate means for addressing those problems (i.e., "normal science"), as well as notable shifts in those shared assumptions (i.e., "paradigm changes" or "scientific revolutions"). Although the current presentation will concentrate on "social science research methodology" as a specific arena for debates about paradigms, I am also making the claim that specialty areas such as "theory" and "methods" occupy a privileged position within larger fields. Hence, I am assuming that paradigm shifts among theorists and methodologists often have impacts on a much wide range of researchers who draw on those core belief systems to guide their work on more substantive topics.

The Renewal of Qualitative Research and the Role of the "Metaphysical Paradigm"

It is easy to claim that one of if not *the* biggest shift within social science research from 1980 through 2000 was the renewed attention to Qualitative Research (e.g., Denzin & Lincoln,

1994). One of the clearest reflections of this trend is the tendency for major textbooks on research methods to provide increasingly even-handed coverage of both Qualitative and Quantitative Research, which can be quite striking in the comparison of older and newer editions of the same text (e.g., Babbie, 1992, 1995, 2004). Of course, this is just the most recent shift in the relative balance between these two approaches during the history of the social sciences. After all, Qualitative Research is at least as old as Quantitative Research, and it has always maintained a dominant position in some fields such as social anthropology. Yet several studies on published articles (Platt, 1996) have noted a clear shift toward a reliance on quantitative methods in the post–World War II period. If we accept that this reliance on *quantitative methods* indicates the broader dominance of *Quantitative Research* from at least the 1960s until the 1980s, then the movement of Qualitative Research from a relatively marginal position to essential equality with Quantitative Research amounts to a clear shift in the historical pattern.

From a "history of science" or "science studies" perspective, this raises an obvious question: How did this transformation come about? My explanation is based on the analysis of this shift as a "paradigm change," based on the version of paradigms as a set of shared beliefs and practices among the members of a specialty area. In particular, I will portray these events as a paradigm change within social science research methodology as a field of studies. My analysis will emphasize the point that the increasing acceptance of Qualitative Research, like all major paradigm shifts, was the result of dedicated efforts by advocates for a particular point of view. Thus, the bulk of this section will portray the recent renewal of attention to Qualitative Research within the social sciences as a "case study" of paradigm change. This means that rather than following the call to "de-Kuhnify" the debate about Qualitative and Quantitative Research (Shadish, 1995b), my goal is to "re-Kuhnify" the debate by using a version of paradigms that is closer to what Kuhn himself expressed in his reconsideration of the concept (Kuhn, 1970, 1974).

Before presenting this summary, I want to note two crucial points. First, it is important to treat the claims of the various advocates in this account as something more than statements of facts. Following Kuhn, it is more useful to treat these historical events as a contest to influence beliefs, including beliefs about the nature of the past. For example, the claim that there was a "positivist paradigm" in the social sciences, let alone that it dominated social science research, is an interpretation of prior history rather than a statement about "facts." My second point is a recognition that an equally "reflexive" perspective also applies to my own account. Hence, I freely admit that what follows is not merely my personal interpretation of the events surrounding the renewed attention to Qualitative Research but also a deliberate effort to create a further paradigm change. In particular, I believe that the "metaphysical paradigm" I will describe below is now exhausted and should be replaced by a "pragmatic approach," which I will describe in the sections that follow this one.

The following description of what I am calling "The Shift from the Positivist to the Metaphysical Paradigm" is based on the the key elements for paradigm change as described by Kuhn (1996):

- a clear characterization of an existing, "dominant paradigm,"
- an increasing sense of frustration with the problems in the existing paradigm,
- a clear characterization of a new paradigm, and
- agreement that the new paradigm resolves the problems in the existing paradigm.

Labeling Positivism as the Dominant Paradigm

When the renewed attention to Qualitative Research began to gain momentum in the late 1970s, there was no commonly agreed upon label for the dominant paradigm that characterized social science research methodology up to that point. As Kuhn's work (1996) demonstrates, this is hardly an unusual situation because researchers who are working within a long-standing paradigm (i.e., a period of "normal science") are often only implicitly aware of the beliefs and practices that guide their work. It is thus not unusual for an existing paradigm to lack both a well-known label and a clear characterization of its content—until that existing system is called into question by a set of challengers. In the present case, it was indeed the challengers who not only labeled the existing dominant approach as the "positivist paradigm" but also provided the initial summary of what was included in that paradigm.

Several commentators (e.g., Shadish, 1995a) have pointed out that this version of positivism has little to do with the formal movement in the philosophy of science that was known as "logical positivism." Instead, it largely served as a label that the advocates of Qualitative Research used to summarize the conventional approach to Quantitative Research. At this point, it is unclear when the advocates of Qualitative Research began emphasizing the term *positivism*, but it is worth noting that it corresponded to a larger use of "positivism" as a label to characterize what critics considered to be outmoded thinking across a range of academic disciplines. Eventually, those debates became a central element of what were known as the "science wars" in the 1990s (e.g., Labinger & Collins, 2001).

What mattered most about making the positivist paradigm the center of the debate, however, was that this framed the discussion around something more than the differences between "qualitative methods" versus "quantitative methods." From this perspective, arguments about which methods to use were merely mechanical or technical issues. *What was really at stake was the nature of research itself.* Furthermore, the advocates of Qualitative Research quite explicitly used Kuhn's own ideas about paradigm shifts to seek changes that were at the heart of social science methodology. By shifting the belief systems in this core specialty area, the advocates of Qualitative Research created an impact that spread across a wide range of disciplines.

This self-conscious use of paradigms was especially evident in the early statements within evaluation research, where M. Patton (1975) titled his first book an *Alternative Evaluation Research Paradigm* and Guba (1978) used a quote about paradigms from Kuhn in the opening of *Toward a Methodology of Naturalistic Inquiry in Educational Evaluation*. Later revisions and expansions of these two monographs became essential textbooks in the renewal of Qualitative Research (Guba & Lincoln, 1989; Lincoln & Guba, 1985; M. Patton, 1997, 2002). Although M. Patton and Guba ultimately parted ways on a great many issues, they did begin with an agreement that the larger debate was about a challenge to the "conventional wisdom" in social science research and not merely about methods. They deliberately chose the language of paradigms to make that point.

The Need for an Alternative to Positivism

Within the classic Kuhnian version of paradigms, the key threat to the existing beliefs and practices in a research field is the recognition of a series of "anomalies" that call the

assumptions and findings of the existing paradigm into question. For Kuhn, anomalies were essentially empirical concerns that consisted of either failed predictions from the existing paradigm or new observations that were incompatible with that paradigm, and either of these sources could create an increasing sense of dissatisfaction with the dominant paradigm. Interestingly, the advocates of renewed attention to Qualitative Research did not use this classic emphasis on anomalies as the centerpiece of their attack on the positivist paradigm. There certainly were claims about the things that Quantitative Research could not accomplish, and which would be possible through Qualitative Research. Even so, the core of the debate was pitched at a much more abstract level, based on concerns from the philosophy of knowledge.

Questioning the dominant paradigm at the level of fundamental assumptions rather than focusing on empirical anomalies enhanced the legitimacy of Qualitative Research through a reinterpretation of basic methodological issues in the social sciences. On one hand, the critics problematized the previously unquestioned assumptions about the approach to research they referred to as positivism. On the other hand, they promised to address these problems by using concepts that they drew from a high-status source, the philosophy of knowledge. Like any good attempt to create a paradigm shift, this challenge not only summarized the problems with the dominant belief system but also provided what its proponents claimed was a superior alternative.

Creating an Alternative Paradigm

The best known approach to creating alternatives to positivism comes from the work of Egon Guba and Yvonna Lincoln, who developed a system for comparing different "paradigms" in social science research through a familiar trilogy of concepts from the philosophy of knowledge: ontology, epistemology, and methodology. Their early comparisons (Lincoln & Guba, 1985, 1988) were between positivism and a competing paradigm they called "naturalistic inquiry," which became better known as constructivism (and occasionally interpretivism). Guba and Lincoln explicitly referred to these approaches as two competing paradigms, in a sense that clearly falls within the "epistemological stance" version of paradigms. Ultimately, they expanded their system to consider other paradigms such as critical theory (Guba, 1990), post-positivism (Guba & Lincoln, 1994), and participatory research (Lincoln & Guba, 2000), but in each case, these comparisons were rooted in ontological issues, thus leading to my choice of the term *metaphysical paradigm* for this approach.

There are, of course, many different ways to draw boundaries within the field of philosophy as a whole, as well as within philosophy of knowledge as a subfield. In the version I follow here, metaphysics consists of issues related to the nature of reality and truth. As such, it both contains the field of ontology, which concentrates on the nature of reality, and makes a connection between ontology and epistemology through questions about the possibility of "truth" in the form of "objective knowledge" about that reality. Hence, the idea of a metaphysical paradigm captures Guba and Lincoln's "top-down" approach, which started with ontological assumptions about the nature of reality, which in turn imposed constraints on any subsequent epistemological assumptions about the nature of knowledge. More specifically, their comparison of positivism and constructivism summarized how

different assumptions about the nature of reality imposed limits on assumptions about the nature of knowledge and what could be known. These assumptions, in turn, limited the range of methodological assumptions about generating knowledge (with the understanding that this topic concerned general issues in producing knowledge, rather than mechanical concerns about the use of methods themselves). Even though Guba and Lincoln's framework nominally gave equal weight to ontology, epistemology, and methodology, its top-down orientation inevitably led to an emphasis on metaphysical questions about the nature of reality and the possibility of truth because these "higher order" assumptions imposed limits on every aspect of their system.

Although this tripartite linkage of ontology, epistemology, and methodology is the most common version of what I am calling the metaphysical paradigm, another philosophical concept, axiology, also appeared in some summaries of this paradigm (e.g., Creswell, 1998). Most references to axiology within the metaphysical paradigm associate it with the study of values, and Creswell's comparison of different traditions in Qualitative Research is a good example of using axiology as a way to consider values along with issues of ontology, epistemology, and methodology. The key problem here is that axiology is a poor fit with the emphasis on the *philosophy of knowledge* that Lincoln and Guba originated. In particular, when advocates of the metaphysical paradigm did consider axiology, they used this concept to address issues that traditionally fall within the branches of philosophy known as "ethics" and "aesthetics," rather than the philosophy of knowledge. Although the importance of both ethical issues and values more generally is undeniable in any consideration of social science research, there is no obvious basis for merging these topics with metaphysical concerns about the nature of reality or the possibility of objective truth. Hence, I will limit the version of the metaphysical paradigm that I describe to its three core concepts from the philosophy of knowledge, although I will return to the issue of axiology in the final section.

Another important aspect of the metaphysical paradigm was its reliance on another concept from Kuhn (1996): the "incommensurability" of paradigms. According to Kuhn, it could be difficult if not impossible to create a one-to-one correspondence between the ideas in two different paradigms. In his Postscript (1996, pp. 198-204), however, Kuhn noted that there could be considerable differences in the degree of "communication breakdown" that occurred during paradigm shifts. In the current case, the metaphysical paradigm took a strong stand on incommensurability, arguing that the radically different assumptions about the nature of reality and truth in paradigms like realism and constructivism made it impossible to translate or reinterpret research between these paradigms. Instead, researchers who chose to operate within one set of metaphysical assumptions inherently rejected the principles that guided researchers who operated within other paradigms.

In drawing out these key features of the metaphysical paradigm, I do not mean to imply that everyone who participated in the renewal of Qualitative Research relied on these assumptions. Although those who advocated for Qualitative Research often did make explicit references to the importance of paradigm differences, the key point for many researchers was not the specific metaphysical system that Guba and others provided. Rather, it was the creation and labeling of a set of alternatives to positivism, along with a justification for pursuing those alternatives instead of what was portrayed as an outdated approach to social science research.

The Metaphysical Paradigm as a Resolution
to the Problems of Positivism

According to Kuhn's formulation of paradigm change, a new paradigm must both account for the successes of the previous paradigm at the same time that it opens opportunities within a community of scholars. The most obvious way that the metaphysical paradigm did this was to incorporate positivism as one of the options with a range of alternative "epistemological stances." Thus, positivism was not excluded from the realm of possibility in social science research. Instead, it was one of several possible sets of assumptions about the ontological, epistemological, and methodological issues that might stand behind any actual research project.

The major strength of this new system was that it reduced positivism to the status of just one among a series of competing "paradigms" in social science methodology. This is not the same as saying, however, that the majority of social science researchers shifted away from what the metaphysical paradigm called positivism, nor does it imply that larger numbers of practicing researchers shifted from Quantitative to Qualitative Research. Instead, I am asserting that the metaphysical paradigm succeeded in determining the terms for discussing the broad nature of social science research methodology. One way to evaluate this claim would be to examine the extent to which the metaphysical paradigm's emphasis on concepts from the philosophy knowledge has had an impact on the most recent textbooks on research methods. Incorporation into textbooks is one of the hallmarks that Kuhn suggested for a successful paradigm, and if discussions of ontology, epistemology, and methodology have become central elements in the instruction of the next generation of researchers, that would be clear evidence for the increasing dominance of the belief system associated with the metaphysical paradigm.

For many practicing researchers, however, the most important implication of this paradigm shift was to legitimatize alternative paradigms such constructivism or critical theory. Most important, the ability to rely on these other belief systems justified both the pursuit of different kinds of research questions and the use of different kinds of methods to answer those questions. In addition, these researchers benefited from their association with lofty intellectual principles such as paradigms (in their descriptions of how scientific research developed) and the philosophy of knowledge (in their summary of the fundamental issues in the research process itself). Overall, the larger context provided by the metaphysical paradigm portrayed the renewed attention to Qualitative Research as much more than a new way to pursue the existing agenda in the social sciences; in addition, it offered the promise of rewriting that agenda.

This completes my account of the shift to the metaphysical paradigm as the belief system for thinking about methodological issues in social science research. By following the Kuhnian version of paradigms that treats them as systems of beliefs and practices among the members of a scholarly specialty, I am claiming that the rise of the metaphysical paradigm led to major changes in methodologists' thinking about both the kinds of problems that were most meaningful for their field as well as the means they preferred for answering those questions. Under this new paradigm, the key questions for research methodologists shifted toward a focus on differences in the underlying philosophical assumptions associated with different ways of doing research. Furthermore, the appropriate means for addressing these issues introduced concepts from the philosophy of knowledge that seldom appeared in earlier discussion

of social science research. Seen in this light, the rise of the metaphysical paradigm did, indeed, do much more than justify Qualitative Research; it also changed much of the discourse that social science methodologists used to discuss the key issues in their field.

The Exhaustion of the Metaphysical Paradigm and the Need for a New Alternative

In this and the section that follow, I will continue my larger argument that we are currently in the midst of a new paradigm shift that will replace the metaphysical paradigm as a dominant belief system for discussing core issues in social science research methodology, just as it replaced positivism. I will make this point by following the same four key elements for paradigm change that I introduced at the beginning of the previous section. In particular, that section provided my characterization of the existing dominant paradigm, whereas this section will lay out the problems that have produced a sense of frustration with that paradigm. The following section will then describe what I call the "pragmatic approach" as the new alternative paradigm, showing how it can both resolve the problems caused by the metaphysical paradigm while also providing a new range of opportunities for scholars in the field of social science research methodology.

The current description of the problems with the metaphysical paradigm will, once again, follow a more Kuhnian approach by emphasizing a series of specific anomalies that methodologists have uncovered in their efforts to apply the metaphysical paradigm—as opposed to the previous effort to downplay anomalies in favor of importing external sources of legitimacy as a means of challenging the dominant paradigm. First, I will consider the problems with the ways that advocates of the metaphysical paradigm define and place boundaries around the different paradigms that are supposed to characterize social science research. Second, I will examine the problems associated with advocates of the metaphysical paradigm's preference for a strong version of incommensurability, which underlies their claims about the incompatibility of the research paradigms. Finally, I will focus on the extent to which metaphysical assumptions actually determine the key decisions that social science researchers make in the course of their work.

How Should We Define the Paradigms?

As the previous section noted, Guba and Lincoln's (e.g., Guba, 1978; Lincoln & Guba, 1985) system began by labeling and comparing only two paradigms, which generally came to be known as positivism and constructivism. In the later version of their work, however, this expanded to a list of five paradigms that also included critical theory, post-positivism, and participatory research (e.g., Guba & Lincoln, 2005). The existence of such a list obviously raises a question about what constitutes a paradigm within social science research methodology—and more important, who gets to define and label the paradigms that are included in that list.

Addressing this issue requires a shift from the conception of paradigms as epistemological stances to a version of paradigms that emphasizes the belief systems and practices within a field, which leads to questions about who defines and draws boundaries around groups of

scholars who are working. This shift in attention often locates active campaigns to establish or undermine the legitimacy of competing groups and their belief systems. For example, in the present case, proponents of post-positivism such as Philips (1990) fought back against being lumped into the essentially pejorative category of positivism and eventually were given their own separate identity. From this point of view, the issue of whether a basic list should include 2 or 5 or 10 paradigms becomes a question about who is making the list and the purposes they are trying to accomplish by comparing a given set of paradigms.

These issues come up repeatedly in the evolving list of paradigms that Guba and Lincoln put forward. One persistent problem was their preferred contrast between constructivism and a version of "positivism" that looked far more like "naïve" or "crude" realism, rather than anything that was actually proposed by the logical positivists themselves (Shadish, 1995a). Yet it was easier for Guba and Lincoln to make their proconstructivist points by using a caricature of positivism, rather than dealing with the more serious and subtle challenges posed by realism, despite the importance of the realist position within social science research (e.g., Sayer, 2000). A similar problem occurs with Guba and Lincoln's portrayal of "post-positivism" as little more than a few minor changes in any attempt to repair a hopelessly broken paradigm. Once again, drawing such a narrow set of boundaries around post-positivism made it easier to ignore the robust and influential developments (e.g., Shadish, Cook, & Campbell, 2002) in an important area of social science research methodology. As a final example, the issue of who controls the list of "accepted" paradigms is particularly important for methodologists who are interested in combining qualitative and quantitative methods because nearly all the lists proposed within the metaphysical paradigm ignore pragmatism, even though it is the favored approach within that subfield (but see Creswell [2003] for one notable effort to include the metaphysical paradigms standard list to include pragmatism).

These examples point to a "political" or "social-movement-based" account of who gets to define and draw boundaries around paradigms, whether this amounts to post-positivists pushing for a place on this list, only to be given second-class citizenship, or the continual exclusion of pragmatism as a member of the club. In this view, paradigms in social science research methodology are not abstract entities with timeless characteristics; instead, what counts as a paradigm and how the core content of a paradigm is portrayed involves a series of ongoing struggles between competing interest groups. Yet if the content of paradigms is subject to this level of human agency, then it makes little sense to claim that principles such as ontology, epistemology, and methodology are actually *defining* characteristics for such paradigms. This shift from a view of paradigms as enduring epistemological stances to dynamic systems of belief within a community of scholars calls into question the metaphysical paradigm's basic attempt to "impose order" on the practices in social science research through an externally defined, a priori system from the philosophy of knowledge. I will return to these larger issues elsewhere in this section, but the key point here is to emphasize the essential arbitrariness in the process of defining and placing boundaries around the set of paradigms that are the core of the metaphysical paradigm itself.

When Are Paradigms Incommensurate?

Aside from charges of favoritism or arbitrariness, the question of how to define paradigms is also closely connected to the claim that different research paradigms produce

"incommensurable" kinds of knowledge. Because the metaphysical paradigm took a strong stance with regard to incommensurability, this meant that "accepting" any one of its paradigms required rejecting all the others, while also creating major communication barriers between the knowledge that was produced through each of these paradigms. This system might make sense if there were indeed clearly defined boundaries that separated paradigms into airtight categories, but this is highly unlikely in a world where paradigms are created through competition and cooperation among human researchers.

Given the previously discussed problems in defining and bounding paradigms, it is not surprising that Guba and Lincoln's own summaries (2005) showed considerable areas of overlap between paradigms such as positivism and post-positivism as well as constructivism and critical theory. This creates a troublesome dilemma, however, because allowing weak or permeable boundaries between paradigms raises questions about the extent to which incommensurability occurs, whereas an absolutist stance means that even "small differences" in paradigmatic assumptions produce serious problems with incommensurability. Guba and Lincoln (2005) proposed a compromise on this issue by accepting a degree of permeability across paradigms, as long as it does not involve key ontological assumptions. This choice is also likewise no surprise, given the top-down, ontology-driven nature of the metaphysical paradigm. Even so, this compromise is not only arbitrary but still does little to inform social science researchers about when issues of incommensurability do or do not apply in actual practice.

A different problem with the metaphysical paradigm's approach to incommensurability is that it ignores Kuhn's statements in the Postscript to the later editions of his book, where from 1970 on he explicitly rejected the claim "that proponents of incommensurable theories cannot communicate with each other at all" (1996, pp. 198-199). Instead, he emphasized that a process of *persuasion* was at the core of conflicts over paradigmatic beliefs but that such persuasion depended on a commonly agreed upon vocabulary to prevent the kind of "breakdown in communication" that he himself associated with the term *incommensurability* (1996, pp. 200-201). Thus, for Kuhn, there is nothing about the nature of paradigms (in the sense of shared beliefs among the members of a specialty area) that inherently prevents the followers of one such paradigm from understanding the claims of another. Rather, the essential question is how effectively the proponents of the two camps can communicate with each other.

In general, the metaphysical paradigm sidestepped this issue by concentrating on precisely the sorts of differences that were most likely to produce a breakdown in communication—metaphysical assumptions about the nature of reality and truth. Unfortunately, without any solid guidance on when incommensurability mattered and when it did not, the top-down nature of the system led all too easily to the conclusion that incompatibilities at the ontological level implied the further impossibility of communicating about epistemological and methodological issues, and thus the inability to combine different methods or even compare the results from projects that originated in different metaphysical paradigms. Yet there is clearly a difference between incommensurable assumptions about the nature of reality versus communication about the similarities and differences in research findings among those who work in the same field. For example, Guba and Lincoln (2005) themselves have argued that it is possible to combine qualitative and quantitative methods, but others (e.g., Sale, Lohfeld, & Brazil, 2002) have continued to use the basic arguments from

the metaphysical paradigm to deny the possibility of combining methods that are rooted in different paradigmatic assumptions.

To What Extent Do Metaphysical Assumptions Guide Our Research?

The issues just raised about combining methods bring us back to the basic question of how much impact metaphysical assumptions actually have on the key issues that occupy the field of social science research methodology. Questions about methods also bring us back to the rather odd "disconnect" between the philosophical discussions that define the metaphysical paradigm and the more practical issues associated with the renewed attention to Qualitative Research in general and qualitative methods in particular. Thus, one of the metaphysical paradigm's most serious anomalies was that it never directly addressed one of the central issues it raised: What is the relationship between metaphysical beliefs and research practices?

Some of the key works in the metaphysical paradigm (e.g., Lincoln & Guba, 1985) were a mixture of theoretical discussions about the nature of social science research as a knowledge-producing enterprise and explicit guidance about how to do such research within the constructivist framework. Outside of "how-to" advice about constructivism, however, the metaphysical paradigm was mostly absorbed with abstract discussions about the philosophical assumptions behind the paradigms that it defined, with correspondingly little attention to how those choices influenced the practical decisions being made by actual researchers. Interestingly, Guba and Lincoln (1994) alluded to this issue in a footnote to their chapter in the first edition of the *Handbook on Qualitative Research:*

> It is unlikely that a practitioner of any paradigm would agree that our summaries closely describe what he or she thinks or does. Workaday scientists rarely have either the time or the inclination to assess what they do in philosophical terms. We do contend, however, that these descriptions [of paradigms] are apt as broad brush strokes, if not always at the individual level. (p. 117)

However, that relatively balanced assessment of the role of paradigms contrasts sharply with the prescriptive tones of their final sentence from that same chapter:

> Paradigm issues are crucial; no inquirer, we maintain, ought to go about the business of inquiry without being clear about just what paradigm informs and guides his or her approach. (p. 116)

This combination of strong demands for self-conscious allegiance to one particular paradigm but less advice about how that should play out in the practices of "workaday" researchers created ongoing difficulties for the metaphysical paradigm. Many of these difficulties arose because the chief proponents of the metaphysical paradigm were well-known qualitative researchers and self-avowed constructivists. This led to the widespread assumption that everything about the metaphysical paradigm promoted the use of qualitative methods. Yet as noted above, Guba and Lincoln were never completely opposed to the use of quantitative methods—even within their own favored form of naturalistic inquiry (e.g., Lincoln & Guba, 1985, 1988). Although any approval of quantitative methods in their work is rare and typically occurs only in passing, Guba and Lincoln (1988) did provide at least

one example of how a survey might be used within naturalistic inquiry. Just as important, Guba and Lincoln (2005) and other strong supporters of the metaphysical paradigm (e.g., Smith & Heshusius, 1986) explicitly stated that they had no objection to combining *methods*, as long as there was no attempt to combine *paradigms*—or, at least, as long as there was no attempt to combine elements of constructivism and positivism.

Probably the simplest summary of Guba and Lincoln's position on the relationship between paradigms and methods was that although they themselves were strongly in favor of qualitative methods, there was nothing about the metaphysical paradigm itself that was *inherently* opposed to quantitative methods. From their point of view, the most important aspects of paradigm allegiances were ontological commitments, not the mundane use of research methods. Rather than coming down completely on one side or the other of the methods divide, almost all the proponents of the metaphysical paradigm insisted instead that the research question should determine the choice of the research method. Interestingly, they never associated this particular position with what they labeled *positivism*, thus making this one central element of the previous "conventional wisdom" that was maintained within the metaphysical paradigm. Yet if it is the research question that is supposed to determine the actual procedures in any given project, then how is that advice related to the requirement to work within one and only one of the paradigms on the list supplied by the metaphysical paradigm?

Following Kuhn, this is exactly the sort of anomaly that creates problems when a paradigm gets challenged. Yet these anomalies often do not come to the forefront until such a challenge occurs. In the current case, it was the increasing interest in combining qualitative and quantitative methods that led to calls for greater clarity about the linkage between philosophical commitments at the so-called paradigm level and practical procedures at the level of data collection and analysis. As not only practicing researchers but also more and more research methodologists pointed to the value of combining qualitative and quantitative methods across a wide variety of research problems, this raised troubling questions about the extent to which metaphysical assumptions actually do guide our work. In particular, if the metaphysical paradigm was supposed to guide work within the field of social science research methodology, then should not those insights translate into practical guidance for how to make decisions about actual research?

This completes my presentation on the serious anomalies that have arisen with the metaphysical paradigm, which may be summarized as follows:

1. Despite the metaphysical paradigm's emphasis on ontology, epistemology, and methodology as the defining characteristics of paradigms in social science research, the actual process of creating these paradigms and drawing boundaries is based on events that occur well outside the philosophy of knowledge.
2. Despite the metaphysical paradigm's insistence that different paradigms create "incommensurable" kinds of knowledge, the attempt to use this strong version of incommensurability repeatedly fails at every level except for debates about the nature of reality and truth.
3. Despite the metaphysical paradigm's claim that methodological problems in the social sciences could be addressed through an ontology-driven version of the philosophy of knowledge, this belief system remains disconnected from practical decisions about the actual conduct of research.

Considering all three of these anomalies, there is an undeniable irony in the contrast between Kuhn's own approach to paradigms versus that of the self-avowed constructivists who created the metaphysical paradigm. For Kuhn, it was the beliefs and practices of the researchers that defined a paradigm, and incommensurability emphasized processes of communication and persuasion about the actual work within a specialty area. This stands in direct contrast with not only the definition of paradigms through standards from the philosophy of knowledge but also the strong claims of incommensurability based on these external standards. Ultimately, this placed the constructivists who created the metaphysical paradigm in the paradoxical position of advocating ontology, epistemology, and methodology as an "objective standard" for comparing belief systems within social science research methodology.

Perhaps the ultimate irony, however, can be found in the close match between the history of these events and Kuhn's own preferred version of the paradigm concept, which emphasized human engagement in changing the beliefs and practices that govern research fields. Seen from this perspective, the methodologists who created and promoted the metaphysical paradigm initially benefited by borrowing much of their system from an "authoritative" source such as the philosophy of knowledge. In addition, borrowing Kuhn's concepts of paradigm and incommensurability linked them to the "intellectual capital" associated with those ideas. As Kuhn would have predicted, however, anomalies accumulated over time as social science methodologists put this belief system into practice within their field. In the present case, these anomalies are especially troubling because they consistently point to problems that originate in the metaphysical paradigm's borrowings from both Kuhn and the philosophy of science, thus calling into question the foundational assumptions on which that paradigm stands. Kuhn would also predict, however, that paradigms seldom fall simply because of their own anomalies. Instead, change arises from new alternatives that promise to address those anomalies.

An Alternative: The "Pragmatic Approach" to Methodology in the Social Sciences

This section begins by taking on the requirement that an alternative to the dominant paradigm must be able to resolve the anomalies in the existing system. Next, it considers the equally important task of demonstrating that the new paradigm also retains many of the virtues of the previous system. Finally, it presents the range of new options that a shift to a pragmatic approach offers to social science methodologists. Before doing so, however, I want to clarify one preliminary point.

In labeling my proposed alternative to what I have been calling the metaphysical paradigm, I have carefully chosen to avoid using the word *paradigm* in the name. Of course, I do consider the "pragmatic approach" to be a direct challenge to the "metaphysical paradigm," but I also want to sort out the confusions around the concept of paradigm as it was used in the previous system. In particular, my commitment to a Kuhnian view of paradigms as systems of shared beliefs among a community of scholars gives me a strong motive for moving away from the "epistemological stance" version of paradigms that was at the core of the metaphysical paradigm. Indeed, I might have preferred avoiding the "P-word" in my

labeling of that earlier approach, if it were not for that system's own heavy and self-conscious reliance on paradigms as a defining element of their approach to social science methodology. Now, however, I believe it is time to return the term *paradigm* to the fields of the history of science and science studies, where it has served as such a useful analytic tool. Of course, the fact that this article is itself an exercise in the history and study of science means that I will continue to refer to paradigms, but I will do my best to restrict my usage to the self-imposed limits I just described.

Addressing the Anomalies in the Metaphysical Paradigm

The previous section identified three basic anomalies in the metaphysical paradigm: how to define paradigms, whether those paradigms were incommensurate, and the extent to which metaphysical assumptions actually guide research in the social sciences. Starting with issues related to defining paradigms, if the previous system ran into trouble by concentrating on ontological assumptions about the nature of reality to distinguish different approaches to social science methodology, then what does the pragmatic approach have to offer as an alternative? Drawing on the core tenets of pragmatism, I propose to concentrate instead on concepts such as "lines of action" (from William James and George Herbert Mead) and "warranted assertions" (from John Dewey), along with a general emphasis on "workability" (from both James and Dewey). There are, of course, many variations within pragmatism as a philosophical system (for useful introductions, see De Waal, 2005; Rescher, 2000), and I certainly do not claim to be an expert in that area. Hence, my preference is to stay close to the central ideas of those who had the most influence on the social sciences—John Dewey, William James, and George Herbert Mead.

Within that tradition, the task of understanding social science research methodology is no different from understanding any other kind of human endeavor. In particular, deciding on a site for a vacation, selecting a method for a research project, or developing a framework for talking about the decisions that researchers make all amount to what Dewey would call "inquiries," which we undertake to assess either the workability of any potential line of action or the bases for what we claim as warranted assertions. In comparison to the metaphysical paradigm, this means giving up on the assumption that there is some external system that will explain our beliefs to us. Fortunately, there is an alternative close at hand, because we can follow Kuhn's advice and treat our field as composed of groups of scholars who share a consensus about which questions are most important to study and which methods are most appropriate for conducting those studies. Although I would not go so far as to identify Kuhn himself as a traditional pragmatist, I believe that applying his approach to our own field would be considerably more useful than the stance advocated by the metaphysical paradigm—and to say that something is truly "useful" is high praise indeed from a pragmatist perspective.

I am thus claiming that there is a fundamental similarity between saying that members of a specialty area share a consensus about which questions are worth asking and which methods are most appropriate for answering them and saying that they share a consensus about the bases for warranted assertions about the workability of different lines of action. At a practical level, researchers in the field of science studies have created a number of empirical approaches for identifying groups of researchers who share these kinds of paradigmatic

interests, including cocitation analysis (Small & Griffith, 1974; White & McCain, 1998). As an example, those tools should be able to locate a group of methodologists who share an interest in different ways of combining qualitative and quantitative methods, and I personally believe that a further investigation within that subfield would currently identify a fascination with typologies as a preferred means for addressing that issue.

Turning to the anomalies associated with the metaphysical paradigm's reliance on a strong version of incommensurability, a pragmatic approach would deny that there is any a priori basis for determining the limits on meaningful communication between researchers who pursue different approaches to their field. Instead, a pragmatic approach would place its emphasis on *shared meanings* and *joint action*. In other words, to what extent are two people (or two research fields) satisfied that they understand each other, and to what extent can they demonstrate the success of that shared meaning by working together on common projects? Here again, the essential emphasis is on actual behavior ("lines of action"), the beliefs that stand behind those behaviors ("warranted assertions"), and the consequences that are likely to follow from different behaviors ("workability").

This approach also makes a useful connection to Kuhn's (1970) revised account of incommensurability in his Postscript, with its emphasis on communication and persuasion. Issues of language and meaning are essential to pragmatism, along with an emphasis on the actual interactions that humans use to negotiate these issues. It would be foolhardy to claim that every person on earth could eventually arrive at a perfect understanding of every other person on earth, but for pragmatism the key issues are, first, how much shared understanding can be accomplished, and then, what kinds of shared lines of behavior are possible from those mutual understandings. This is a far cry from a strong version of incommensurability that peremptorily denies the possibility of meaningful communication across externally defined boundaries. For example, if a realist and a constructivist share an intellectual exchange on a conference panel and the audience applauds in response, that is more than enough to convince a pragmatist that something other than complete incommensurability has happened.

Finally, the anomalies associated with the essential role that research questions rather than metaphysical assumptions play is little more than a restatement of the pragmatist approach itself. In fact, this quintessentially pragmatic approach has always been at the foundation of social science's approach to questions about how to connect "theory" and "methods" in our research—what M. Patton (1988, 2002) called a "paradigm of choices." Finding this kind of continuity between the principles that have guided our previous work and the key tenets of a "new" paradigm is reassuring, to say the least. Even so, there remains the larger task of sifting through the work done under the previous paradigm to locate the useful accomplishments that need to be maintained within the new belief system. Sheer newness is not a virtue, however, and it is important to sift through the accomplishments of previous paradigms to locate the useful elements that need to be maintained.

Retaining the Valuable Contributions of the Previous Paradigm

In this section, I want to address two contributions from the metaphysical paradigm that I think are especially important to retain and build upon: the importance of epistemological issues within social science research methodology and the need to recognize the central

place of worldviews in our work as researchers. Fortunately, I believe the pragmatic approach I am advocating has considerable strengths to offer in building on these prior accomplishments.

My first choice for a valuable contribution from the metaphysical paradigm is its success in shifting discussions about social science research beyond the mostly mechanical concerns that previously dominated this field. Methodology is indeed about more than just methods. To advance that part of our ongoing conversation about bigger issues in social science methodology, I would like to raise the question of why pragmatism was consistently omitted from the list of approaches considered in the metaphysical paradigm. Actually, there is a relatively straightforward explanation for this exclusion because most pragmatists take a much broader approach to the metaphysical issue. For example, James had an essentially agnostic view toward metaphysics as a whole, whereas Dewey created a revised version of metaphysics that focused on the experience of actions in the world, rather than the existence of either a world outside those experiences or experiences outside such a world. This contrasts sharply with the metaphysical paradigm's emphasis on the nature of reality and possibility of objective truth. Instead, one of the defining features of pragmatism would be an emphasis on "what difference it makes" to believe one thing versus another or to act one way rather than another. Hence, descriptions of pragmatism do not fit easily into a system that it is organized around the essential assumptions of the foundation of the metaphysical paradigm.

Within the philosophy of knowledge, the possibility of separating the more metaphysical aspects of ontology from epistemological and methodological issues is a widely accepted option, and even those approaches that do emphasize the connections between ontology and epistemology often treat them as "loosely coupled" (Giere, 1999; Hacking, 1983, 2000; Zammito, 2004). Thus, what I am calling the pragmatist approach does not ignore the relevance of epistemology and other concepts from the philosophy of knowledge. It does, however, reject the top-down privileging of ontological assumptions in the metaphysical paradigm as simply too narrow an approach to issues in the philosophy of knowledge.

The value of maintaining our attention to epistemological issues in social science research methodology can easily be preserved with a pragmatic approach; however, I would argue that we do need to be more restrained in this regard. The pragmatic approach that I am advocating would concentrate on methodology as an area that connects issues at the abstract level of epistemology and the mechanical level of actual methods. There is thus little reason why *purely* epistemological issues should be of major interest to social science research methodologists—that is the province of philosophers. Yet the "top-down" approach that characterized the metaphysical paradigm had a strong tendency not only to privilege epistemology over methods but also to emphasize ontological issues above all others. In contrast, a pragmatic approach would treat issues related to research itself as the principal "line of action" that methodologists should study, with equal attention to both the epistemological and technical "warrants" that influence how we conduct our research. In particular, I believe that we need to devote equal attention to studying both the connection between methodology and epistemology and the connection between methodology and methods. Furthermore, we need to use our study of methodology to connect issues in epistemology with issues in research design, rather than separating our thoughts about the nature of knowledge from our efforts to produce it. Figure 1 illustrates this relationship.

Figure 1
Placing Methodology at the Center

Epistemology

$\updownarrow$

Methodology

$\updownarrow$

Methods
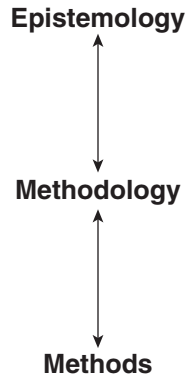
The second aspect of the metaphysical paradigm that the pragmatic approach should not merely retain but build upon is the attention to how our worldviews influence the research that we do. At several points, I have summarized the essential elements of Kuhn's concept of paradigms as a set of shared beliefs among the members of a specialty area about both which questions are most important and which methods are most appropriate for answering those questions. But research questions are not inherently "important," and methods are not automatically "appropriate." Instead, it is we ourselves who make the choices about what is important and what is appropriate, and those choices inevitably involve aspects of our personal history, social background, and cultural assumptions. Furthermore, I do not believe for one moment that the participants in any research field ever represent a random assortment with regard to personal history, social background, and cultural assumptions. So we need to continue the reflexive outlook toward what we choose to study and how we choose to do so.

It is important to note that these aspects of our worldviews as researchers involve essentially ethical and moral issues. In addition, recall that some versions of the metaphysical paradigm went beyond the typical emphasis on ontology, epistemology, and methodology to include ethical and moral concerns under the heading of axiology. Earlier, I argued that this inclusion of axiology was too great a departure from the core emphasis on the philosophy on knowledge that was the defining feature of most work within the metaphysical paradigm. In contrast, questions about the connection between ethics and epistemology were a long-standing concern for pragmatists such as James, Dewey, and Mead. In particular, it is not the abstract pursuit of knowledge through "inquiry" that is central to a pragmatic approach, but rather the attempt to gain knowledge in the pursuit of desired ends. Fortunately, the long-standing and central role that ethical issues have played within the field of pragmatism not only reinforces this continuity with the concerns raised by the metaphysical paradigm but also provides a more direct connection to those issues, in contrast to the less direct connection between axiology and the core elements from the philosophy of knowledge.

This attention to the ethical aspects of both the lines of action that people follow and the means they choose to attain them is not, however, the sort of crude pragmatism that simply claims "the ends justify the means." Fortunately, Dewey, James, and Mead all provided useful role models in this regard through their key roles in the original American "Progressive Movement" (Mills, 1969). Each of these scholars was aware of how their own values shaped their research goals, and they each used their writings to further their preferred political agendas. Whether one agrees or disagrees with those values and politics, the more important point is that a pragmatic approach reminds us that our values and our politics are always a part of who we are and how we act. In the end, these aspects of our worldviews are at least as important as our beliefs about metaphysical issues, and a pragmatic approach would redirect our attention to investigating the factors that have the most impact on what we choose to study and how we choose to do so.

New Opportunities Offered by the Pragmatic Approach

Pragmatism is certainly not new to the social sciences, and there are several good reviews of pragmatism, both as a general belief system for the social sciences (e.g., Maxcy, 2003) and as a specific justification for combining qualitative and quantitative methods (Johnson & Onwuegbuzie, 2006). My goal in this section is to add to that existing work by suggesting several ways that pragmatism provides new options for addressing methodological issues in the social sciences. Table 2 provides a simple summary of the framework I propose. The columns represent the main comparative distinctions in the table, contrasting a pragmatic approach with the two most common methodological stances in the social sciences, Qualitative and Quantitative Research. The rows make these comparisons in terms of three choices that are central to both the kinds of purposes we pursue and the kinds of procedures we use in that pursuit. The table is thus self-consciously organized around key issues in social science research methodology, rather than the metaphysical paradigm's emphasis on abstract issues in the philosophy of knowledge.

In proposing Table 2 as an organizing framework for understanding what the pragmatic approach can offer social science methodology, I must acknowledge a distinct debt to Michael Patton, whose earliest work (1975) divides the differences between Qualitative and Quantitative Research along similar lines, and whose recent work (2002) also seeks a "third way" to address these divisions. In contrast to M. Patton, however, I have reduced the number of rows in my table to the smallest set of key issues that can capture the essential difference between these approaches. This reframing of the key issues also leads me to a rather different summary of what pragmatism has to offer.

Starting with the top row, the distinction between induction and deduction shows up in almost every methods textbook as one of the key features that distinguishes Qualitative and Quantitative Research. Such a sharp separation between these two ways of connecting theory and data is undoubtedly useful for teaching beginning students about the most basic options in making decisions about the kind of research they will do. Yet any experienced researcher knows that the actual process of moving between theory and data never operates in only one direction. Outside of introductory textbooks, the only time that we pretend that research can be either purely inductive or deductive is when we write up our work for publication. During the actual design, collection, and analysis of data, however, it is impossible

Table 2
A Pragmatic Alternative to the Key Issues in
Social Science Research Methodology

	Qualitative Approach	Quantitative Approach	Pragmatic Approach
Connection of theory and data	Induction	Deduction	Abduction
Relationship to research process	Subjectivity	Objectivity	Intersubjectivity
Inference from data	Context	Generality	Transferability

to operate in either an exclusively theory- or data-driven fashion. Try to imagine acting in the real world for as long as 5 minutes while operating in either a strictly theory-driven, deductive mode or a data-driven, inductive mode—I certainly would not want to be on the same road as anyone who had such a fatally limited approach to driving a vehicle!

The pragmatic approach is to rely on a version of *abductive* reasoning that moves back and forth between induction and deduction—first converting observations into theories and then assessing those theories through action. I must note, however, that my particular version of abduction goes somewhat beyond its traditional use within pragmatism, where it is often treated solely as using theories to account for observations, and thus as an aspect of inductive inferences. From a pragmatic point of view, however, the only way to assess those inferences is through action. Hence, one of the most common uses of abduction in pragmatic reasoning is to further a process of inquiry that evaluates the results of prior inductions through their ability to predict the workability of future lines of behavior.

This particular version of the abductive process is quite familiar to researchers who combine qualitative and quantitative methods in a sequential fashion (Ivankova, Creswell, & Stick, 2006; Morgan, 1998, 2006, in press), where the inductive results from a qualitative approach can serve as inputs to the deductive goals of a quantitative approach, and vice versa. This movement back and forth between different approaches to theory and data does not have to be limited to combinations of methods within a single project. A far more interesting option is to explore the potential for working back and forth between the kinds of knowledge we have already produced under the separate banners of Qualitative and Quantitative Research. What if Quantitative Researchers paid more attention to the incredible range of hypotheses that Qualitative Researchers have "generated" for them? And what if Qualitative Researchers spent more time exploring the range of phenomena that Quantitative Researchers have sought to define and test? Rather than each camp dismissing the others' work as based on wholly incompatible assumptions, our goal would be to search for useful points of connection. These are the kinds of opportunities that a pragmatic approach to social science research has to offer.

Table 2 also argues that the usual forced dichotomy between subjective and objective is an equally artificial summary of the relationship between the researcher and the research process. Thus, although one often hears arguments about the impossibility of "complete objectivity," it is just as hard to imagine what "complete subjectivity" would be. Once again, it is only for teaching purposes that we can discuss the possibility of being either completely subjective or objective. Any practicing researcher has to work back and forth between various frames of reference, and the classic pragmatic emphasis on an *intersubjective* approach

captures this duality. Inevitably, we need to achieve a sufficient degree of mutual understanding with not only the people who participate in our research but also the colleagues who read and review the products of our research. Thus, this dimension represents the emphasis on processes of communication and shared meaning that are central to any pragmatic approach.

Intersubjectivity also represents the pragmatic response to issues of incommensurability. In a pragmatic approach, there is no problem with asserting both that there is a single "real world" and that all individuals have their own unique interpretations of that world. Rather than treating incommensurability as an all-or-nothing barrier between mutual understanding, pragmatists treat issues of intersubjectivity as a key element of social life. In particular, the pragmatist emphasis on creating knowledge through lines of action points to the kinds of "joint actions" or "projects" that different people or groups can accomplish together. From a methodological point of view, this suggests a "reflexive" orientation where we pay more attention to the social processes that produce both consensus and conflict within our field by asking the following questions: Which aspects of our beliefs about research are in contention and which are widely shared, and how do issues make the transition back and forth between these statuses?

The final dualism that Table 2 seeks to transcend is the distinction between knowledge that is either specific and context-dependent or universal and generalized. In this case, the pragmatic approach once again rejects the need to choose between a pair of extremes where research results are either completely specific to a particular context or an instance of some more generalized set of principles. I do not believe it is possible for research results to be either so unique that they have no implications whatsoever for other actors in other settings or so generalized that they apply in every possible historical and cultural setting. From a pragmatic approach, an important question is the extent to which we can take the things that we learn with one type of method in one specific setting and make the most appropriate use of that knowledge in other circumstances. Once again, this involves a process of working back and forth, in this case between specific results and their more general implications.

I have borrowed the idea of *transferabilty* of research results from Lincoln and Guba, who treated the question of whether the things learned in one context can be applied in another as an "empirical" issue (1985, p. 297). In other words, we cannot simply assume that our methods and our approach to research makes our results either context-bound or generalizable; instead, we need to investigate the factors that affect whether the knowledge we gain can be transferred to other settings. The classic example is assessing whether the results from one particular program evaluation have implications for the use of similar programs in other contexts. This advocacy of transferability thus arises from a solidly pragmatic focus on what people can do with the knowledge they produce and not on abstract arguments about the possibility or impossibility of generalizability. Instead, we always need to ask how much of our existing knowledge might be usable in a new set of circumstances, as well as what our warrant is for making any such claims.

Overall, I believe that an emphasis on abduction, intersubjectivity, and transferability creates a range of new opportunities for thinking about classic methodological issues in the social sciences. At the same time, I want to avoid being misinterpreted as claiming that there is no value in the distinctions between induction and deduction, subjectivity and objectivity, or context and generality. These concepts do have their uses for comparing different approaches to

social science research. In particular, I find it helpful to think of Qualitative Research as research that emphasizes an inductive–subjective–contextual approach, whereas Quantitative Research emphasizes a deductive–objective–generalizing approach. Where we encounter problems is by treating these broad tendencies as absolute, defining characteristics for these two different approaches, and these problems become even worse when we deny the possibility of working back and forth between the two extremes. Fortunately, the pragmatic approach offers an effective alternative through its emphasis on the abductive–intersubjective–transferable aspects of our research.

Conclusions

One of the major goals of this article was to examine the recent renewal of attention to Qualitative Research in an effort to understand how combining qualitative and quantitative methods could be lifted to a similar level of legitimacy. My primary "tool" for this analysis was a version of the paradigm concept that both emphasized shared beliefs within a community of researchers and encouraged investigating changes within any field as an active social process. I will thus conclude by focusing on two lessons that can be learned from my reading of this recent history, with an emphasis on the practical implications of those lessons for those of us who are currently engaged in creating a further paradigm shift.

One important lesson from the successful advocacy for renewed attention to Qualitative Research was the value of separating mechanical issues related to qualitative methods per se from a larger set of questions about why we do the kind of research that we do. I believe that there is considerable value in maintaining that distinction. For those who wish to promote the combining of qualitative and quantitative methods, this points to the importance of treating this approach as more than just a mechanically superior way to answer research questions. Although we need to avoid the metaphysical excesses of the previous paradigm, we also need to acknowledge and pursue the epistemological implications of our broader approach to social science research. Fortunately, a pragmatic approach not only supports the kinds of research methods that we advocate but also provides a basis for reorienting the field of social science research methodology in the directions that we favor. The great strength of this pragmatic approach to social science research methodology is its emphasis on the connection between epistemological concerns about the nature of the knowledge that we produce and technical concerns about the methods that we use to generate that knowledge. This moves beyond technical questions about mixing or combining methods and puts us in a position to argue for a properly *integrated methodology* for the social sciences.

The final lesson I want to draw is that merely offering better ways to answer existing questions is not enough to create major changes in a dominant belief system. Thus, despite the problems that resulted from an excessively metaphysical approach to social science methodology, it is also important to recall the initial excitement that greeted those ideas. New paradigms offer new ways to think about the world—new questions to ask and new ways to pursue them. This is the essential nature of paradigms as "worldviews," and those of us who value the possibilities that come from combining qualitative and quantitative methods need to promote a worldview that encourages others to share our beliefs. One part of that work involves inspiring others about the practical value of research designs that

combine different methods. Another part involves linking those practical strengths to larger methodological issues in ways that create a sense of excitement about the directions in which our field is headed, and that is the ultimate goal of this article.

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