EMPIRICAL RESEARCH WITHOUT CERTAINTY

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ABSTRACT. In this essay, Robert Floden reviews three recent volumes in the Philosophy, Theory, and Educational Research series that address the philosophical implications of three "isms" — postpositivism, pragmatism, and poststructuralism — for empirical educational research. These volumes, written by D.C. Phillips, Gert J.J. Biesta, and Michael A. Peters, each in partnership with Nicholas C. Burbules, draw on several lines of currently active philosophical work to address a challenge to educational researchers: What can empirical research hope to accomplish, given the evident difficulties in discovering any tight connection between, on the one hand, instructional methods and policy directives and, on the other hand, student outcomes, especially student learning? The traditions discussed are rough groupings of scholars, with views that are loosely overlapping, rather than clearly defined. Floden observes that the general ideas represented in postpositivism and pragmatism offer researchers frameworks that support optimism about the contributions of empirical work. In contrast, the book on poststructuralism illustrates scholarship in that tradition, but suggests that most research reports will be colored by power relations and be open to multiple interpretations. Floden concludes that empirical researchers may find material in these books enlightening, but will probably need assistance from philosopher colleagues to see how they can inform the practical work of empirical research.

The titles of the three volumes under review here combine "educational research" with an "ism": *Postpositivism and Educational Research*, by D.C. Phillips and Nicholas C. Burbules; *Pragmatism and Educational Research*, by Gert J.J. Biesta and Nicholas C. Burbules; and *Poststructuralism and Educational Research*, by Michael A. Peters and Nicholas C. Burbules.[1] These books, however, do not signal a return to the period when philosophers of education sought to package major philosophical schools so the teachers and administrators could pick the "ism" that best suited their own approach to education. Instead, these books draw on several lines of currently active philosophical work to address a question that bothers, or ought to bother, educational researchers: What can empirical research hope to accomplish, given the evident difficulties in discovering any tight connection between, on the one hand, instructional methods and policy directives and, on the other hand, student outcomes, especially student learning?

Educational researchers frequently face challenges to their ability to produce credible conclusions. They hear from philosophers and critical theorists about the multiplicity of interpretations that can be made of their data. Moreover,

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1. D.C. Phillips and Nicholas C. Burbules, *Postpositivism and Educational Research* (Lanham, Maryland: Rowman and Littlefield, 2000); Gert J.J. Biesta and Nicholas C. Burbules, *Pragmatism and Educational Research* (Lanham, Maryland: Rowman and Littlefield, 2003); and Michael A. Peters and Nicholas C. Burbules, *Poststructuralism and Educational Research* (Lanham, Maryland: Rowman and Littlefield, 2004). These works will be cited in the text as *Postpositivism*, *Pragmatism*, and *Poststructuralism*, respectively, for all subsequent references. Because this review deals in part with work by the Editor of *Educational Theory*, all decisions on the manuscript, including the selection of the reviewer, were made by Associate Editor and Review Editor Chris Higgins.

they hear that the interpretations most likely to hold sway are determined by relations of power and privilege, not by rules of science or the weight of evidence. Researchers hear from policy makers and practitioners that they are not offering answers to the pressing questions about what curriculum to choose or whether more charter schools should be created. They even hear from other researchers that the networks of connections among variables are even more complex and variable than previously thought. What is a researcher to do? What should be said and done? Can credible conclusions be reached? If not, what then?

These three books are published as a series. The series preface indicates the overall purpose and intended audience:

> Each volume will show how a particular set of philosophical and theoretical positions affects the methods and aims of educational research and will discuss specific examples of research to show these orientations at work.... These books are intended to be of interest not only to educational researchers, but to anyone in education wanting to understand what these various ''isms'' are about. (*Postpositivism*, vii)

The ''isms'' covered by the books each respond to the challenges posed by critiques of the certainty of empirical educational research. The volumes deliver on the promise to show how the philosophical positions discussed affect both the methods and aims of educational research. The largest audience for some of these books, however, is probably not educational researchers, if that label is intended to denote those who do empirical research on education. Instead, books are more likely to appeal to scholars already working in philosophical and theoretical domains of education. While some of those scholars also engage in empirical work, most stick to work with text. Empirical researchers would probably benefit from these works, but they will likely need some help in understanding them. Such help might come in an introduction to research course or philosophy of research course taught by an individual or team with the philosophical background needed to help empirical researchers see the books' value and with the empirical research experience needed to test abstractions against the practices of empirical work.

The Challenge: Loss of Certainty

As educational research increased in size and scope during the twentieth century, it was initially dominated by versions of an empiricist epistemology that portrayed research as a process for gathering data and using them to support general claims. As the field of educational testing grew, researchers developed procedures for increasing the reliability of measures and the validity of inferences. Procedures for analysis, whether of numbers or of interpretations, progressed toward methods for making results ever more trustworthy. Experimental psychology was taken as an initial model, but even when methods were adopted from anthropology

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or sociology, the rhetoric suggested that using the latest methods would yield a progressively clearer understanding of educational phenomena.

These books sketch different versions of such optimistic views of the possibilities for a precise, objective science of education. In each case, this optimistic view is portrayed as something from the past, a former golden age in which researchers imagined a steady march toward answers to questions about the connections among teaching, learning, and social context. For example, in the opening paragraph of *Postpositivism and Educational Research*, Phillips and Burbules allude to a time when social scientists were (or at least might have been) viewed with awe. In *Pragmatism and Educational Research*, Biesta and Burbules refer to an earlier period in philosophy of science when the analytic philosophers, bent on systematizing the logic of science, were dominant. For Peters and Burbules, as they discuss in *Poststructuralism and Educational Research*, the dominant approach in an earlier optimistic period was structuralism, which was thought to hold the key for the scientific study of language systems, and ultimately for the whole of human science.[2]

Each of these earlier views of social science failed to deliver on the promise for methods and theory that would support general conclusions, independent of the beliefs and social position of the scholars who conducted the research. In each case, the failure to devise methods leading to objective, general conclusions sprang from recognition of fallacies in the underlying epistemology and results from studies in fields from literary theory to the sociology of science. Across a surprisingly wide range of disciplines, scholars argued for the impossibility of finding a method for establishing certain truth independent of the researchers involved. These arguments led to the shift in the dominant view of research. These books are alike in describing a response to the arguments against certainty; they vary in which alternative epistemology they describe as a replacement. Phillips describes the replacement of positivism by postpositivism. Biesta describes the replacement of analytic philosophy by pragmatism. Peters describes the replacement of structuralism by poststructuralism.

Though many educational researchers may go about their work without considering the broad questions raised in these moves toward fallibilist epistemologies, the frequent appearance of related essays in *Educational Researcher*, a leading journal of the American Educational Research Association, is evidence that most researchers are aware that the questions are being raised in prominent venues. Those essays often refer in passing to the shifts in epistemological theory. Researchers looking for deeper discussions could turn to these books. As I discuss in the remainder of this essay, each

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2. For remainder of this essay, I will refer to each book by the name of its first author. That will reduce the repetitive use of ''Burbules'' and is, I think, in keeping with the roles of the authors described in the series preface: the ''predominant voice and point of view for each volume in the series belongs to the first author.'' This abbreviation is not intended to diminish the considerable role that Burbules played in preparing these volumes, but it will make my exposition clearer.

explores one approach to doing research with the recognition that certainty is impossible.

Postpositivism and Educational Research

As Phillips acknowledges, postpositivism is not a unified school of thought. At some points he characterizes it as an "orientation," but he makes no attempt to specify what *that* might be. The book provides a more informative characterization through presenting positions that might be taken by a researcher who acknowledges the reasons why complete certainty is impossible, yet wishes to maintain the goal of making credible claims based on rigorous inquiry:

> The postpositivist approach to research is based on seeking appropriate and adequate *warrants* for conclusions, of hewing to standards of truth and falsity that subject hypotheses (of whatever type) to test and thus potential disconfirmation, and on being open-minded about criticism. (*Postpositivism*, 86–87)

Phillips begins with a description of positivism, tracing its roots in empiricism, which is itself a form of foundationalism. As a "fundamentalist" form of foundationalism, positivism holds that epistemic certainty can be attained by basing all claims to knowledge on observation statements, phrased to be indubitable. After describing the key ideas of positivism, and its extreme version, logical positivism, Phillips goes on to dispel some mistaken ideas about positivism. In writing about educational research, the label "positivist" is sometimes used as a derogatory term to refer to anyone who uses experimental designs, does quantitative analysis, or believes that research is aimed at describing facts about the world. Many scholars who use or endorse experiments or quantitative analysis, however, have explicitly rejected logical positivism. Moreover, one of the tenets of logical positivism is a rejection of realism. Phillips's account clarifies the central ideas of logical positivism, hoping to show what will have to go when positivism is rejected (for example, the idea that neutral observation statements can be established) and what can be retained (such as the idea that experiments provide good evidence for causal claims).

Having clarified what positivism is and is not, Phillips lays out several problems with positivism, which are also problems for other forms of foundationalist empiricism. The problems revolve around the lack of agreement on which truths (including truths of logic) are self-evident, the recognition that observational claims are based in part on implicit theories, and the inconclusiveness of chains of reasoning from evidence to conclusions. Phillips explains each of these problems, which have been widely accepted as undercutting the possibility of achieving absolute certainty about any empirical claims. Positivism, as an epistemology linked to certainty, has been refuted. The question, then, is what can be salvaged in a postpositivist, nonfoundationalist world of research.

In the second and third chapters of the book, Phillips makes the case for a view of research that is still committed to the pursuit of truth through rigorous inquiry, but is open to the possibility that the conclusions reached in any study might be wrong. Frequently citing the work of John Dewey and Karl Popper, Phillips considers how researchers can avoid thinking that rejection of positivism leads

inevitably to the rejection of all commitment to trying to build strong arguments from empirical evidence to conclusions about the world. Phillips uses a question-and-response format to consider issues such as objectivity, the meaning of truth, relativism, and value neutrality. For each issue, the questions sometimes ask for clarification; at other times they ask why researchers should avoid postmodern skepticism about any possibility of seeking the truth. Sometimes the questions and responses become an extended dialogue, exploring an issue in depth.

The discussion of "truth" and "relativism" includes the following questions and answers:

> *Question*: It is noteworthy that in your previous answer (and in the earlier discussions) you made use of the notion of "truth." Is this a useful concept these days? Is there such a thing as *truth*? Isn't it the case that some people will believe one thing, others will believe something else?...
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> *Response*: This is a vitally important sequence of questions. But note that it is a sequence — the statement runs together a number of issues that, at least in the first instance, need to be separated out. The issues raised are ones that exercise many people these days, for we live in postmodern times when there is skepticism about general notions like "truth" and "reality," and various types of relativism (e.g., in the epistemological and moral realms) abound.... It is important to see that you slid from talking about belief to talking about truth — but these are not the same thing.... It is a confusion — and a pernicious one — to say that because a person believes X, and another doesn't, that X is both true and not true, or relatedly, to say that there are "multiple (incompatible) realities." (*Postpositivism*, 35–36)

Throughout the book, Phillips refers to examples of scientific studies to illustrate his points. Some examples are drawn from the social sciences (for instance, Lawrence Kolhberg's work on moral development); some from other sciences (for example, work to understand the operation of chromosomes). In much of the book, the discussion of postpositivist research treats issues in ways that are applicable across many fields; the final chapter, however, focuses on issues with particular relevance to educational research. One issue is the way in which explanations of human *behavior* are different from explanations of human *action*. The main difference is that, for studies of human action, it is critical to understand what *meaning* the action had for the actors themselves. Such explanations involve intentions and reasons, rather than descriptions of the physical conditions within which people were operating. For this discussion Phillips uses an extended example based on a study of mathematics learning.

The second issue of particular relevance to educational research is the difference between explanations in terms of individual actors and explanations in terms of social and organizational factors. Using an example where researchers analyzed a large national data set to determine the connections between school size and student achievement, Phillips notes the interplay between analyses that describe the link between institution size and student behaviors and analyses that probe the intentions, motivations, and goals of individual students would complement that larger behavioral analysis.

Two themes run through the discussions of many specific issues. First, Phillips argues that, although no research can lead to conclusions that are certainly correct, attention to the strengths and weaknesses of a method and attempts to address the

weaknesses can give research a good basis for asserting the conclusion. Second, he notes that no single research method is uniformly best; the choice of research method should be made with reference to the question to be answered. The various reasons for rejecting positivism's claims to infallibility and associated narrow views of method should lead researchers to a recognition of every conclusion's fallibility and an appreciation for the variation in method, tied to the various questions to be answered.

Pragmatism and Educational Research

In *Pragmatism and Educational Research*, Biesta sketches the history of pragmatism, describing its initial development by Charles Sanders Peirce, John Dewey, George Herbert Mead, and William James in the nineteenth century as an outgrowth of German philosophy and the emerging fascination with the methods of science. Interest in pragmatism waned during the ascendance of analytic philosophy, but when the analytic movement faltered, pragmatism returned as a way of responding to the shortcomings of analysis.

Biesta points in particular to the way that W.V.O. Quine's ''Two Dogmas of Empiricism'' undermined the premise that truths of logic could serve as the firm foundation for knowledge.[3] Quine likewise argued persuasively that no empirical claims could be established as indubitable foundations for conclusions of empirical science. The loss of a firm foundation Biesta describes is part of the same intellectual shift that toppled logical positivism. Phillips describes postpositivism as a way to see that research continues to provide warrants for empirical claims; Biesta similarly sees pragmatism as a basis for conceiving how it remains possible to carry out rigorous research, including research in education.

Just as Phillips notes that postpositivism is not a unified school of thought, Biesta points out that philosophers vary in how they think about pragmatism. Biesta chooses to organize his presentation around the version of pragmatism explicated by John Dewey, acknowledging that this is only one variant of pragmatism.

Because practical questions, questions about what to do, are so central to educational research, Dewey's pragmatism is especially appealing as a way of thinking about what research can accomplish. Dewey's pragmatism puts action and activity at the center, a happy location for research on a practical activity. Dewey's attraction to the scientific method makes his views appealing to many empirical researchers, who also wish to take advantage of the methods that have made science successful. Dewey's views about inquiry, however, differ in important ways from what is often seen as the work of science — that is, constructing and testing theories that paint nature as it really is, apart from the distorted perceptions of individual humans. For Dewey, human aims and human values are an inextricable part of inquiry. Knowledge is tied to use; it is not

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3. Willard Van Orman Quine, *From a Logical Point of View: Nine Logico-Philosophical Essays*, 2nd rev. ed. (Cambridge, Massachusetts: Harvard University Press, 1980), 20–46.

a distinct domain. Adopting Dewey's views on inquiry and knowledge would represent a substantial change in the thinking of most educational researchers.

The second and third chapters of Biesta's book are taken up with an explication of Dewey's theories of experience and of inquiry. In Dewey's pragmatism, the fundamental entities are not the individuals and objects that other approaches see as the focus for description. Instead, Dewey sees transactions as fundamental. For him, the world is first and foremost processes, rather than objects: "*transaction* puts the process first and treats distinctions such as those between subject and object or between organism and environment as *functional* distinctions emerging from this process — not as starting points or metaphysical givens" (*Pragmatism*, 26).

For the study of people (and other living things), the transactions at the center of inquiry are those between the person and the environment. In these transactions both person and environment shape and are being shaped. In a school setting, children's actions are affected by the classroom context and those actions simultaneously affect that context, which in turn changes the effects on the child. The ongoing *process* is at the core; the interplay is what Dewey calls experience.

Both the person and the environment change through experience. The change in the person is especially significant for educational research, because the change in the person is *learning*. Dewey described learning as the accumulation of meanings as the person experiences the consequences of particular transactions. The uniquely human characteristic of learning is the association of symbols with actions, so that it is possible to deliberate on the meanings of possible actions without having to carry them out. As humans developed shared symbols, such as the words of language, they were able to communicate with one another about experiences, allowing for the accumulation and transmission of experience across space and time.

Building on Dewey's transactional theory of knowledge, Biesta explains how Dewey views inquiry as the process for acquiring knowledge. Versions of Dewey's theory of inquiry appear across his publications, beginning with *How We Think*.[4] The steps — felt difficulty, definition of the difficulty, formulation of a possible solution, testing of the solution, observation of the results — sound familiar to many readers as a version of the scientific method, or of commonsense problem solving. For Dewey — the pragmatist — a key feature of this process is that the observation of results yields tentative new expectations for future transactions, not a firm conclusion about the world.

While Dewey's emphasis on felt difficulties, actions, and transactions tightly connected his pragmatism to practical action, he recognized that researchers seek to acquire knowledge apart from their own practical felt difficulties. Researchers seek out situations where the connections between action and consequences are not yet known, with the aim of advancing the acquisition of knowledge that can be

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4. John Dewey, *How We Think* (Boston: D.C. Heath, 1910).

shared with others. Researchers studying whether federal accountability policies improve elementary school instruction, for example, may have selected that topic because they recognize that the policies are based on untested assumptions about the connections between these policies and teachers' practices. Those assumptions are closely linked to the practical difficulties faced by policy makers and teachers. For policy makers, the difficulty is how to craft policies that will improve instruction; for teachers, the difficulty is how to respond to policies in ways that are consistent with their own ideas about good teaching. Those difficulties are felt by the policy makers and the teachers, not by the researchers. As Dewey indicated, research is tied to felt difficulties, but researchers are not constrained to work only on their own difficulties. They can go beyond their own felt problems as they plan their systematic studies of the problems and actions of students, teachers, and others involved in education.

As Biesta moves from discussion of research in general to considering social science and educational research, he stresses that Dewey saw no need for a change in epistemology. Inquiry is still linked to practical action — that is, to learning about links between action and consequences. A difference for social inquiry is that the domain is more complex because actions in the social domain include processes in the material world as well as human relations. Transactions in the social world involve both processes where material objects affect one another and social processes in which actions are affected by the meanings that people attach to events and by the assumptions that people make about what events mean to others. The transaction between a teacher and student will play out differently depending on whether a teacher interprets a student hand movement as a request to speak or an attempt to stretch a sore muscle.

Dewey also distinguishes between physical facts, where the relations in a transaction are independent of human intentions, and social facts, which are linked to a network of human purposes and intentions. The facts of classroom interactions, for example, are tied to the meanings given to events by teacher and students. Those meanings are, in turn, connected to what those in classrooms are trying, individually and collectively, to accomplish.

Because educational inquiry seeks to understand the connections among social facts, investigators make assumptions about purposes and intentions. A pragmatist educational researcher would treat those purposes and intentions as hypotheses rather than as givens. In sharp contrast to other (social scientific) models of educational research, pragmatists undertake inquiry in the hope of learning about both means and ends, rather than only learning about the means to a predetermined, fixed end. Instead of believing that researchers should be "objective," in the sense that they would keep questions of value out of their investigations, the pragmatist's view of inquiry makes it essential that questions of value be part of all social research.

The emphasis on practice and the inclusion of values as objects of inquiry imply that the result of educational research is something quite different from a compendium of "what works" results. For the pragmatist, the results of research

are accounts of the connections among natural facts, social facts, intentions, and purposes — accounts that practitioners can draw on in their own ongoing inquiries. For the pragmatist, the place of practitioner is elevated because the worth of the researcher's inquiry is determined by the way that it improves ongoing practice.

In his fourth chapter, Biesta discusses how pragmatism addresses issues that arise from its conception of knowledge as based on human experience in solving problems. Pragmatism denies the possibility of achieving certainty. Dewey insisted that all knowledge is fallible. In social inquiry, both natural and social facts are open to revision. Dewey denied, however, that this leads to radical relativism.

Although pragmatism has an element of subjectivism, since people gain experience through their own inquiries, that subjectivism does not lead to pernicious relativism. As people work and live together, they develop shared meanings and build an intersubjective understanding of the world. Questions about truth apply, not to an isolated individual's experience, but to the intersubjective meanings used in social life. Intersubjective truths have value as they support ongoing solution of problems in the real world; they are always open to revision when they do not have the expected practical consequences.

In his final chapter, Biesta explains how the preceding general discussions of a pragmatist view of social research address issues critical to educational research. One primary implication is that educational research should include attention to the value dimensions of education, rather than restricting attention to means. For example, the pragmatist researcher interested in studying teacher effectiveness would look at what counts as "effective," as well as trying to understand the effects of various teaching strategies. As Biesta puts it, "the point of doing educational research is not only to find out what might be possible or achievable, but also to deal with the question of whether what is possible and achievable is *desirable* — and more specifically, whether it is desirable from an educational point of view" (*Pragmatism*, 109).

A second implication is that the results from educational research should not be seen as rules for teachers to follow. Research yields possible connections between actions and consequences. It does not yield rules, both because a teacher might not wish to achieve the consequences and because the particular social world in which a teacher is practicing may be different from that in which the research was conducted. Practitioners can use results from research as plausible hypotheses about the consequences that might follow from their actions, but the practitioner should think of practice as ongoing inquiry, where ideas about connections might be revised: "Teachers and other educators are not simply passive consumers of educational knowledge, but are much the creators of educational knowledge, even when they are drawing from research conducted by others, because their very act of problem solving *is* a process of inquiry" (*Pragmatism*, 111).

POSTSTRUCTURALISM AND EDUCATIONAL RESEARCH

Peters also sets his discussion in the context of a rejection of the idea that research can produce certainty. In his case, the historical transition is between

structuralism, which offered the hope of certainty, and poststructuralism, which depicts what research can achieve once that hope is gone. Where Phillips and Biesta looked at the loss of certainty in science, Peters's account of structuralism is centered on studies of text, particularly literary studies.

The roots of structuralism lie in the early twentieth century, but it gained wide influence in the 1950s and 1960s. The impact of this theory grew as its ideas were applied beyond analysis of text to the analysis of a wide range of social practices. The broad premise of structuralism was that social practices, starting with language but extending much more widely, are organized by structures, both conscious and unconscious: "[I]n the same way that language is structured by grammar and other rules that allow us to organize our speech intelligibly, *even when we are not aware of and cannot articulate those structures*, so too are cultures and societies organized by structures that the participants may not be aware of, but which nevertheless give their social practices and institutions coherence and meaning" (*Poststructuralism*, 109). Structuralists optimistically believed that a wide range of social phenomena were governed by structures. Research would, they thought, uncover structures that would have broad law-like generality, explaining a broad range of social phenomena.

In his introduction and first chapter, Peters sketches the rise and demise of structuralism, which was replaced by poststructuralism. He also outlines the related movement from modernism to postmodernism. Chapter 1 is largely devoted to laying out the similarities and differences among structuralism, poststructuralism, modernism, and postmodernism. Peters devotes space to clarifying these relations because the terms are sometimes conflated (especially postmodernism and poststructuralism), leading to confusions about their import and merits. Structuralism and poststructuralism also have similarities (for example, an emphasis on linguistic systems), as well as differences (such as their positions on whether ambiguity can be eliminated). Moreover, the terms have multiple meanings (for instance, "modernism" sometimes refers to a particular artistic style, while at other times it refers to a belief in the progress of knowledge through science). To make the landscape even more confusing, key intellectual figures are associated with more than one position. Jean-François Lyotard, for example, is considered a poststructuralist, but is also widely cited as a postmodernist.

Peters's approach to sorting out these intellectual positions combines brief descriptions of the historical shifts from one influential thinker to another, with descriptions organized around the similarities and differences among the several positions. The list of scholars is long, including familiar names such as Friedrich Nietzsche, Martin Heidegger, Jacques Lacan, Michel Foucault, and Jean Piaget, as well as names that may be recognized only by specialists, such as Shoshana Felman, Barry Hindess, Edward Soja, and Simon During.

Despite their number and diversity, all poststructuralist positions might be roughly described as rejecting the possibility of discovering a general set of structures that organize social life. The poststructuralists assert instead that texts,

actions, events — indeed all aspects of human life — can be interpreted in many ways, with no way of determining which interpretations are better than others. They also see human life as strongly influenced by the power relationships present in social relations and institutions, undercutting the idea that individuals are able to act freely. In the shift from structuralism to poststructuralism, the determinants of human action change from structures to power relationships.

It is not possible, however, to give a single characterization of what poststructuralist scholars seek to accomplish, so it is also impossible to say what an educational researcher seeking to adopt poststructuralist ideas would aim to do: "[I]t is difficult to talk of 'aims' in relation to poststructuralism because it is not possible, strictly speaking, to ascribe specific aims to a cultural movement that is more like a complex variety of thought or a movement (in the musical sense) than a school, a doctrine, or body of theory" (*Poststructuralism*, 33).

Peters elaborates on poststructuralist ideas about the influence of power and institutional relations on research by describing ideas from the work of Foucault and Lyotard. Two ideas that bear directly on educational research are that the dominant power structures (for example, as embodied in government agencies) largely determine what knowledge claims are viewed as legitimate and that only research addressing technical, immediately useful questions will survive. Peters cites recent priorities adopted by U.S. government agencies as examples of directions poststructuralists expect to see — an emphasis on "what works," as supported by research methods endorsed by the governing powers.[5]

In chapter 3, Peters provides further exposition on the work of important poststructuralists such as Foucault and Derrida, and also discusses the topics addressed by scholars who devote most of their scholarship to issues in education. While reiterating that poststructuralist approaches to educational research cannot be systematized into standard methods of criticism, Peters describes the way in which Foucault's work serves as a model for the analysis of a wide variety of uses of language in education. Poststructuralist educational researchers point out the ways in which education texts (broadly construed) can be multiply interpreted, particularly by considering the power and interests of the various groups connected to the texts — researchers, teachers, students, business leaders, activists, and so on.

Chapter 4 begins with an optimistic perspective on the loss of certainty that is the beginning point for all three of these books. Rather than seeing that loss as a challenge for researchers trying to conduct research leading to justified conclusions, Peters sees the insight that certainty is impossible as a breakthrough to a new intellectual freedom:

> At its simplest, poststructuralism can be viewed as introducing a new freedom of thought, action, and interpretation after the "death of God" declared by Nietzsche and the consequent demise of absolute truth, foundations, and a final horizon of interpretation. With the loss of

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5. See, for example, materials on the Web site of the What Works Clearinghouse: http://ies.ed.gov/ncee/wwc/.

God and of all possible God-substitutes, a new interpretive space developed that emphasized a
greater fragility of the self — its finitude, corporeality, and freedom. ''(*Poststructuralism*, 81)

The remainder of the chapter is divided between a poststructuralist
reinterpretation of Karl Marx and Paulo Freire and summaries of the work of three
education scholars — Henry Giroux, Patti Lather, and Stephen Ball. The material
on Marx and Freire illustrates how the possibilities for multiple interpretations
of text can give new meanings to the writings of major figures in Western
thought. Readers seeking guidance about educational research, however, will be
disappointed by the absence of any discussion of what the new interpretations of
Marx or Freire suggest about what topics to study or what methods to use.

The accounts of the three education scholars exemplify work that comes from
attention to language and power relations. The book stops short here, too, of
helping readers see what poststructuralist thought implies for what educational
researchers should do. These scholars have elected areas of study that are central to
poststructuralist work — multiple interpretations of text in the context of power
relationships. If those reading the book also wish to pursue these topics, then these
accounts may direct them to examples to emulate. But Peters does not indicate
what these examples suggest for the approaches that should be taken to studying
other topics.

In all four chapters, Peters gives long lists of writers who have either influenced
the scholars he discusses or have been influenced by them. The lists suggest the size
of the poststructuralist movement, but do not give specifics about the topics the
listed authors address, or about their relative importance within the movement.
Few of those listed are included in the references at the end of each chapter, so
interested readers are on their own in locating additional works to read. Readers
will likely find these lists of names frustrating rather than helpful. Without more
information about what each scholar has contributed, or which works will give
most assistance in thinking about educational research, the lists will not help the
intended audience for the book gain access to whatever insights poststructuralists
may offer.

When Firm Ground Disappears, Where Does Educational Research Stand?

The three books in this series begin from similar starting points. At some point
in the not-so-distant past, educational researchers worked from the comfortable
position that through careful adherence to established research approaches, they
would produce additions to knowledge that stood on a firm basis of evidence and
argument. That comfortable position could draw on an epistemology or philosophy
of science that endorsed hopes for progress toward an ever-increasing body of
established general knowledge. For many researchers, the epistemology was a
version of empiricism, perhaps linked to positivism. For others, the epistemology
was grounded in a variant of structuralism.

Then the ground shook repeatedly, leaving no firm bedrock on which to build
a solid edifice of knowledge. The specific shocks came from theoretical arguments

revealing flaws in the dogmas of empiricism, psychological studies demonstrating the effects of frames of reference on observation reports, sociohistorical work on the influences on knowledge claims, and shifts in interpretive scholarship. Although practices in educational research often continued to proceed as though conclusions from accepted research methods were unimpeachable, discussions about the implications of the uncertain bases for knowledge began to be published in leading research journals.

At the same time, educational researchers began using a wider range of research methods, prompting discussions about what standards of evidence should be used for each method, whether some standards transcended particular methods, and how the claims reached by different approaches should be combined or adjudicated. Sometimes scholars wrote optimistically about the ways that different methods complemented each other; sometimes scholars from one research tradition raised skeptical questions about the worth of claims made by those from other traditions.

The stakes in these discussions were raised when the U.S. Congress began drafting legislation that defined "scientific" educational research and tied federal funding to its definition. The National Research Council entered the debate with *Scientific Research in Education*, its report on what makes for good science on education topics.[6] That report generated further debate in the journals, introducing issues about the bases for research quality and about the importance of "scientific" research in comparison to scholarship based in the humanities.

The debates in the journals often make reference to basic epistemological issues, mentioning the intellectual movements discussed at depth in these three books — pragmatism, postmodernism, positivism, empiricism, and structuralism. Given the length constraints for journal articles, the discussion rarely goes beyond a sketchy description of these complex bodies of thought. These three books serve as a resource for scholars who wish to move one level deeper in understanding how these "isms" — postpositivism, pragmatism, and poststructuralism — give direction to researchers trying to carry out inquiry that acknowledges the uncertain footing, yet still provides warrants for conclusions. For postpositivism and pragmatism, the general message is hopeful, explaining how the possibility of error does not imply that all claims are wrong. For poststructuralism, the researcher may find little guidance for choosing among possible interpretations. Perhaps the message from poststructuralism is the paradoxical — possibly even self-defeating — suggestion that all claims are up for grabs, even the claims of poststructuralism itself.

For readers already familiar with the philosophical traditions, these three books suggest what approaches educational researchers should take in their work. The books all make clear that none of these traditions represents consensus of a clearly defined group of scholars. "Postpositivism," "pragmatism," and "poststructuralism" are labels for groups of theorists, each of which has a

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6. National Research Council, *Scientific Research in Education*, eds. Richard J. Shavelson and Lisa Towne (Washington, D.C.: National Academies Press, 2002).

somewhat different take on the issues. So any characterization of what each book suggests is necessarily overly simple and not consistent with the views of some of the theorists discussed. With that caveat, I offer the following overly simple summaries of what each book suggests: Phillips would have researchers acknowledge that their task is to make the strongest possible argument for their claims, acknowledging that the claims remain fallible. Biesta wants researchers to see that the products of research are always tentative, to be tested further in the ongoing inquiries of practice. Central to those inquiries of practice are reflections on the values guiding practice, values that may be modified in light of inquiry. Peters asks researchers to take a skeptical attitude toward claims from research, unveiling ways that social position affects research's questions and answers. In each case, these books give researchers a means to continue scholarship in ways that respect the uncertainties inherent in all research.

For an audience of empirical researchers, studying these books will be enlightening, but none of these books will be an easy read. The best points of access are the particular examples of educational research, which serve as bridges to the philosophical discussions. Phillips's book contains several examples of empirical research, illustrating philosophical points about objectivity, relativity, and so on. These can aid researchers struggling to figure out how to think through these issues in their empirical work. Peters's book describes the work of several poststructuralist educational researchers. These examples may allow researchers to imagine what they might do if they decided to carry out such poststructuralist research themselves. Though Biesta does not offer examples of researchers who have adopted Dewey's views, his exposition of Dewey's pragmatism gives general suggestions for how this approach would shape educational research.

Although the books have much to offer, empirical researchers will need substantial assistance in figuring out how the ideas in these books might affect their selection of research topics and methods, or might alter the ways in which they describe the support for conclusions they reach. Of the three, Phillips does the best job of explaining the philosophical points in everyday language and illustrating the points with examples from educational research. Biesta and Peters, however, presume considerable familiarity with philosophical ideas and literature. Biesta includes no examples of educational research; Peters includes only examples by poststructuralist theorists. To get access to the insights in these books, empirical researchers will need assistance in understanding the philosophical ideas and in seeing how these connect to the practical conduct of educational research. That assistance might come in graduate seminars, reading groups, or discussions with their philosophical colleagues. As philosophers of education look for ways to make connections to their colleagues, reading these books together might be a fruitful beginning.