Interpretation, Social Science, and Educational Research

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Can it make sense to ask the human sciences to overcome the conditions of our own nature? There is something disturbingly paradoxical about a science that has for its subject the agent that creates the science. How are we to stand back from being human in order to observe what it is to be human? Even to attempt this standing back—and there are many ways in which it has been undertaken in pursuit of scientific truth—is a way of being human that, in turn, some other person will be able to study. Are we then condemned to travel in self-reflecting circles, to create knowledge of human beings only to find that what has been done is to create another mode of life rather than a lasting truth?

Smith 1997, p. 13

Introduction

In response to a request from the US federal government to clarify the norms and practices that make educational research scientific, the American National Research Council released a report in 2002 entitled, *Scientific Research in Education*. The NRC report drew a number of conclusions, three of which are noteworthy for this essay. First, no one method could answer all questions about education. Certain questions are appropriate for quantitative investigation; other questions are better suited to qualitative study. Second, quantitative methods should not be privileged over qualitative methods. On the contrary, quantitative and qualitative researches "are epistemologically quite similar. . . as we recognize that both can be pursued rigorously, we do not distinguish between them as being different forms of inquiry" (Shavelson and Towne 2002, p. 19). Finally, the report concluded that the systematic study of education is shaped by the contexts in which education occurs. This fact "requires close attention to powerful contextual factors in the research process" (Feuer et al. 2002, p. 7).

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Almost immediately, the NRC report sparked controversy. Critics charged that it privileged quantitative research over qualitative research, minimized the scientific nature of qualitative studies, and failed to account for the fact that educational research takes place in diverse dynamic settings that mitigate against a definition of science that presumably applies across contexts. Some critics wondered whether qualitative research should aspire to be a science at all. Perhaps the humanities are a more appropriate model for interpretive inquiry. (See, e.g., the 2005 symposium on scientific research in education published in Teachers College Record. Also see Eisenhart 2006.)

The controversy generated by the NRC report echoes debates that raged during the nineteenth century. Prior to that time, systematic studies of the human condition largely fell to scholars in fields such as jurisprudence, religious thought, and moral philosophy. By the nineteenth century, however, science had achieved enormous success in explaining the natural world. Many people began to think that science also could help scholars, policy makers, and ordinary citizens understand, regulate, and improve social life. The institutionalization of the modern social sciences in universities during the nineteenth century signified faith that this hope would imminently be realized.

Then, as now, achieving rigorous knowledge of the social world through social science proved to be challenging. A key challenge for social science concerns the fact that the social world is innately meaningful and must be *interpreted*. Clifford Geertz likens the social world to a "web of significance," a network of socio-cultural–historical meanings that are expressed and embodied in values, customs, traditions, religious symbols, political practices, etc. (Geertz 1973/2000, p. 5). In the course of their everyday lives, human beings constantly interpret the social worlds in which they live.

The fact that interpretation is a necessary and ineradicable feature of social life raises two important questions for social science: (1) Does interpretation in social science differ from interpretation that transpires in ordinary (nonscientific) circumstances? (2) Can social scientists achieve rational, valid, objective interpretations (i.e., interpretive knowledge) of the social worlds they inhabit? How one answers these questions depends in part on how one defines interpretation.

One definition frames interpretation in terms of epistemology (the philosophy of knowing and knowledge). From this perspective, interpretation is a method or cognitive strategy we employ to clarify or construct meaning. The goal is to produce valid understanding of the meaningful "objects" that comprise the social world, such as texts, artifacts, spoken words, experiences, and intentions. The epistemological view of interpretation posits that interpretation in social science differs from interpretation in everyday life. Whereas ordinary "folk" interpretations tend to be pre-reflective, unexamined, and frequently biased, interpretation in social science must and in principle can become rational, objective, and valid knowledge.

The second definition frames interpretation in terms of ontology (the philosophy of being and existence). On this view, interpretation is not an act of cognition, a

special method, or a theory of knowledge. Interpretation instead characterizes how human beings experience the world. Realized through our moods, concerns, self-understanding, and practical engagements with people and things we encounter in our sociohistorical contexts, interpretation is a mode of lived experience, an unavoidable and uniquely human way of existing in the world. The ontological view of interpretation posits that interpretation in social science does not differ from the sort of interpretations that arise in everyday life. Both forms of interpretation are modes of lived experience. Moreover, the quest to transform ordinary lived interpretation into scientific knowledge is wrong headed. Scientific knowledge remains indebted to the ordinary "lived" interpretations it seeks to clarify and correct. This is true of quantitative as well as qualitative modes of inquiry.

The epistemological and ontological views of interpretation interact as "sibling rivals." Debates about the aims, norms, and practices of social science reflect and perhaps also perpetuate this hermeneutic rivalry. To appreciate how both epistemological and ontological views of interpretation have influenced the development of social science, it is helpful to examine each view in greater detail and to trace their rivalry over time.

Our examination begins in the nineteenth century with Wilhelm Dilthey (1833–1911), a German Protestant theologian who devoted his life to developing the *Geisteswissenschaften* (German for social science, also translated as the human or moral sciences, or sciences of mind or of the human spirit). Dilthey argued that interpretation is both a pre-reflective mode of everyday lived experience and also is the method and theory of knowledge for social science. Ultimately, Dilthey intuited that as a mode of lived experience, interpretation could not easily be transformed into reflective scientific knowledge. Dilthey's quest to develop social science consequently foundered.

During the twentieth century, the implications of lived understanding for science and social science were examined from two different perspectives. One perspective is known as post-positivist philosophy. Post-positivist philosophers include Ludwig Wittgenstein (1889–1951), Hans Reichenbach (1891–1953), Karl Popper (1902–1994), Imre Lakatos (1922–1974), Norwood R. Hanson (1924–1967), and Thomas Kuhn (1922–1996). The second perspective draws on the philosophy of understanding and interpretation known as hermeneutics. The German philosopher, Hans-Georg Gadamer (1900–2002), was largely responsible for developing the contemporary hermeneutic view of social science.

Post-positivist philosophers and Gadamer agree that human beings always and necessarily pre-reflectively understand and interpret the social worlds they inhabit. They draw different lessons from this fact, however, and believe that it poses different challenges for social science. These differences stem in part from the fact that post-positivist philosophers regard interpretation in epistemological terms, whereas Gadamer defines interpretation in ontological terms. Nonetheless, post-positivist social science and Gadamerian social science share some interesting similarities.

In the sections that follow, I will sketch how Dilthey sought to ground social science in interpretation. I then will briefly examine post-positivist epistemological

social science and Gadamer's ontological social science, highlighting their similarities and differences. In conclusion, I will consider some practical implications and challenges that post-positivist and Gadamerian social science pose for educational research. (For another analysis of these issues, see Kerdeman 2014.)

Social Science and Interpretation: Dilthey's Dilemma

Dilthey's vision of social science is grounded in the ontological premise that human beings naturally express their understanding of their life experience by creating meaningful objects such as texts, works of art, and various cultural expressions. These meaningful objects must be interpreted to maintain social life, Dilthey argued. Social science thus should not follow the methods of physical science but instead requires a hermeneutic method. Social science also requires an epistemology of interpretive knowledge, not a theory of knowledge concerned with causal explanation. The German word *Verstehen* (interpretation) captures Dilthey's contention that interpretation is central to the social sciences and distinguishes the social sciences from the physical sciences. While the two forms of science are distinct, Dilthey insisted that they are equally rigorous.

Dilthey based his ideas on the "hermeneutic circle," a method of interpretation that had become prominent during the Reformation, when Protestant theologians sought to interpret the Bible without appealing to the Catholic church to determine the meaning of problematic passages or resolve interpretive disputes. As its name suggests, the hermeneutic method assumes that interpretation is circular. Because the meaning of the Bible was thought to be unified and self-consistent, the meaning of any specific passage could be determined by referring to the text as a whole. But since understanding the text as a whole presumes understanding its problematic passages, determining the meaning of a problematic passage depends on a preliminary intuitive grasp of the text's entire meaning. Biblical exegesis thus revolves in a continuous cycle of anticipation and revision. Interpreting the meaning of any part of the Bible depends on having already grasped the meaning of the Bible as a whole, even as one's understanding of the entire Bible will be reshaped as one clarifies the meaning of its constituent parts.

Another Protestant theologian, Friedrich Schleiermacher (1768–1834), had maintained that the hermeneutic circle could ensure understanding not only of the Bible but also of all written and oral expressions. Using this method correctly, interpreters could understand the meaning of linguistic expressions better than the authors who produced them. Schleiermacher transformed the hermeneutic circle from a method of Biblical exegesis into a general theory of interpretation that explained how understanding could be achieved in ordinary circumstances.

Extending Schleiermacher, Dilthey argued that the hermeneutic circle not only helps people reflectively interpret others' meaningful expressions—it also enables people to understand themselves and their own lived experience. This is because life experiences do not unfold in linear fashion but instead are related to one another as parts are related to wholes. On the one hand, we understand specific life

experiences in terms of how we understand the meaning of our life as a whole. At the same time, the way we understand our life as a whole depends on how we understand specific life experiences. Understanding specific experiences thus both shapes and is shaped by understanding the overall meaning of our lives, even as understanding our life's overall meaning both shapes and is shaped by how we understand specific life experiences.

Applying the hermeneutic circle to life, Dilthey realized that understanding is temporal. Past experiences constitute the "parts" of one's biography. The future makes it possible to fathom one's life in toto. Interpreting the meaning of the future depends on and reshapes one's understanding of the past, even as interpreting the meaning of the past anticipates and revises one's understanding of the future. This is a different kind of "hermeneutic circle."

Interpreting the meaning of time therefore is integral to interpreting the meaning of lived experience. It is important to note that at the pre-reflective level of interpreting lived experience, time is not an *object* for interpretation. It is impossible to freeze or objectify the past in order to interpret it. Neither is the future a stationary target at which interpretation aims. One rather interprets the meaning of time as one moves through time. Where lived experience is concerned, interpreting time and experiencing time arise together.

Dilthey drew two conclusions from this insight. First, the meaning of life experience is fluid. With the passage of time, the meaning of the past and the future shifts. At different points in the future, one's past will mean different things. The meaning of the future also changes, depending on the particular stage of life from which the future is anticipated.

Second, interpreting lived experience does not produce understanding that is abstracted from the experience of living. We cannot escape our situation in order to interpret it. Nor can we interpret our life and *then* experience it. Rather, we are practically engaged in living the life that we interpret. Pre-reflective interpretation, in short, is situated, partial, practical, and personal.

Dilthey believed that pre-reflective understanding of one's own lived experience could evolve into reflective theoretical knowledge of how other people understand their life experience. Theoretical knowledge thereby extends and refines pre-theoretical practical understanding. But Dilthey recognized that because theoretical knowledge is rooted in pre-theoretical understanding, knowledge in the social sciences, particularly in history, differs from knowledge in the physical sciences. The historian who reflectively examines the meaning of historical events himself is a historical being. The meaning of the past therefore cannot be established once and for all but instead varies with the perspective of the historian who studies it. Moreover, theoretical understanding remains rooted in the pre-theoretical understanding it aims to clarify, even as pre-theoretical understanding is changed by the theoretical understanding that it grounds. Interpretation consequently revolves in a never-ending circle, rendering historical knowledge provisional and incomplete.

While Dilthey believed that the interpretive social sciences could be as rigorous as the physical sciences, the character of knowledge in interpretive social science

nonetheless vexed him. What kind of scientific knowledge is possible when the meaning of that which is studied constantly changes? Such knowledge is relative, not general and valid. Moreover, insofar as the historian "belongs" to the history he studies, historical knowledge cannot be objective. Historical knowledge instead is subjective, provisional, and partial. The circularity of interpretation raises the possibility that historical "knowledge" simply proves what it presupposes.

In an effort to reconcile understanding lived experience with scientific knowledge, Dilthey turned to his younger contemporary, Edmund Husserl (1859–1938). Husserl demonstrated that science grows out of particular "lifeworlds" and necessarily presupposes nonscientific understandings. But while Husserl argued that scientific knowledge depends on pre-reflectively understanding particular lifeworlds, he also subjected the lifeworld to phenomenological analysis in order to discover "essences" in lived experience that make theoretical knowledge of the lifeworld possible. In so doing, Husserl encountered a contradiction.

On the one hand, Husserl concluded that pre-theoretical understandings are relative to particular lifeworlds. On the other hand, he believed that phenomenological analysis could produce knowledge of the lifeworld that is universal and unconditionally valid. It was unclear how phenomenological analysis could both transcend and also remain indebted to pre-theoretical understanding. Phenomenological analysis of the lifeworld thus seemed necessary but impossible. In the end, Husserl did not solve Dilthey's dilemma; instead he exposed another aspect of it.

Twentieth-Century Science and Social Science: Reconceiving Dilthey's Dilemma

Arguing that pre-reflective lived understanding is ineradicable, Dilthey believed an impassable gulf separated pre-theoretical lived understanding from rigorous social science. Pre-reflective lived understanding is subjective, practical, situated, partial, and temporal. Scientific interpretation, by contrast, is objective, theoretical, generalizable, stable, and certain.

During the twentieth century, thinkers from a variety of disciplines began to challenge the pessimism surrounding social science. These thinkers did not dispute Dilthey's insight into the inevitability of lived understanding. On the contrary, they embraced the view that human beings cannot but help interpret the meaningful social worlds in which they live. They also acknowledged that ordinary lived understandings necessarily are situated and typically are unexamined. But these facts about lived understanding do not make social science impossible, as Dilthey thought. They *do* require us to rethink our definition of "science" and to reframe the norms and practices of social science.

Two reconceptualizations of science proved to be especially important for the development of social science. Post-positivist philosophers reconceived social science by showing how epistemology and science could accommodate the

inevitable influence of lived understanding. By contrast, Hans-Georg Gadamer argued that the inevitable presence of lived understanding means that social science is not subject to epistemology but instead must be reconceived in ontological terms. Because readers likely are more familiar with post-positivist philosophy, I will discuss it first. I then will turn to Gadamer's ontological hermeneutics.

Post-Positivist Science: Epistemology and Lived Understanding

Post-positivist thinkers developed complex and sometimes competing positions. Taken together, however, their ideas pose deep challenges to nineteenth-century beliefs about science. Many nineteenth-century scholars, including Dilthey, thought that science must be based on a foundation of impartial observation and that conclusions could not be deemed true unless they were indubitable. Post-positivists challenge both of these assumptions.

As a matter of principle, post-positivists maintain observation cannot be impartial or free from the influence of interpretation. (For an account of the developments that led to this position, see Phillips and Burbules 2000.) On the contrary, observation always is theory laden. Denis Phillips explains: "What an observer sees, and also what he or she does not see, is influenced by the background knowledge of the observer—the theories hypotheses, assumptions, or conceptual schemes that the observer harbors" (Phillips and Burbules 2000, p. 15). Stephen J. Gould adds that scientific observations are influenced by a scientist's personal understandings of experience and also by the intersubjective understandings of experience that imbue the scientist's social world. Gould writes: "Facts are not pure and unsullied bits of information; culture also influences what we see and how we see it. Theories, moreover, are not inexorable inductions from facts. The most creative theories are often imaginative visions imposed upon facts; the source of imagination is also strongly cultural" (Gould 1981/1996, pp. 53–54).

Following Phillips and Gould, we can say that when scientists observe the world, they do not see a set of "bare" facts or "brute" data. Observation instead necessarily is filtered through a set of "interpretive lenses" that reflect personal as well as sociocultural understandings. But if observation cannot be distinguished from interpretation, how can scientists be sure they are seeing what "really is there," not what they *think* or *hope* is the case?

According to post-positivists, the inevitability of interpretation does not doom observation to being biased. The fact that we cannot "remove" our interpretive lenses does not mean that interpretive lenses necessarily circumscribe or dictate ways of seeing. If interpretive lenses influence observation, so interpretive lenses also can be clarified and, if necessary, corrected through critical examination and reflective reason.

Objectivity for post-positivists thus does not signify that one's pre-reflective interpretations have been dissolved. Achieving objectivity remains possible, because observations can be publicly scrutinized and tested. Claude Steele maintains that engaging in science is a compelling way to clarify interpretive lenses and critically examine bias. He writes:

> One of the first things one learns as a social psychologist is that everyone is capable of bias. We simply are not, and cannot be, all knowing and completely objective. Our understandings and views of the world are partial, and reflect the circumstances of our particular lives. This is where a discipline like science comes in. It doesn't purge us of bias. This is where I would stake my claim, at any rate. The constant back-and-forth between ideas and research hammers away at bias and, just as important, often reveals aspects of reality that surpass our original ideas and insights. (Steele 2010, pp. 13–14)

Thus for Steele, science will not completely dispel the ordinary unexamined interpretations that researchers necessarily bring to their work. But, Steele insists the process of "hammering away" at assumptions that otherwise would operate behind our backs, beyond the reach of conscious awareness, can help scientists critically examine the interpretive assumptions that influence not only observation but also all phases of research.

Formulating research questions, for example, requires the scientist to reflect on the purpose of his study and to think hard about the type and scope of evidence he must collect. Analyzing data provides another opportunity to anticipate and address alternative or competing interpretations and arguments. Subjecting conclusions to public scrutiny also can surface assumptions that scientists might otherwise miss. Reviewers who are not invested in a study likely will spot interpretive influences that researchers might have overlooked. Reviewers' perspectives also may differ from researchers' perspectives. Considering findings from multiple perspectives can be another effective strategy for revealing bias.

Critically evaluating interpretive assumptions not only helps research become more objective: it also helps scientists evaluate the validity of their claims. Attempting to refute—not prove—a conclusion is key, post-positivists contend. It always is possible to find evidence that proves one's hypotheses and arguments. Recognizing evidence that *refutes* one's conclusions is a stronger test of validity, however. When a claim withstands rigorous attempts to disprove it, we can feel more confident that it is warranted. Of course, eliminating error is not the same as proving truth. Claims that we warrant today can be refuted tomorrow; human judgment is prone to error, and the history of science is replete with examples of claims that have been overturned. Nevertheless, some claims *are* better than others and qualify as being true, at least, for now.

Truth claims for post-positivists thus are not absolute, irrefutable, or certain. Rather, they are provisional, partial, and fallible. This does not mean that evidence is either absolute or unnecessary. It *does* mean that determining whether evidence justifies a claim is a conjectural process that relies on imperfect judgment.

In sum, post-positivists acknowledge the inevitability of lived understanding but argue that science and epistemology can accommodate this fact. Objectivity does not signify that interpretation ceases to influence observation. Objectivity instead means that interpretive influences have been critically examined. Validity is not

ascribed to claims that are certain or self-evidently true. Validity instead must be determined, and this requires scientists to exercise interpretive judgment. Because interpretive judgment is fallible and prone to error, a claim that we deem true may turn out to be false. It does not follow, however, that one claim is as good as another or that truth is captive to social contexts and reducible to cultural meaning. Truth remains a regulative ideal to which scientists can and should aspire. As Gould notes: "Science cannot escape its curious dialectic. Embedded in surrounding culture, it can, nonetheless, be a powerful agent for questioning and even overturning the assumptions that nurture it..." (Gould 1981/1996, p. 55).

The centrality of human judgment for science makes science a quintessentially *human* enterprise. Gould writes: "But creative thought in science is exactly this—not mechanical collection of facts and induction of theories, but a complex process involving intuition, bias, and insight from other fields. Science, at its best, interposes human judgment and ingenuity in all its proceedings. It is, after all (though we sometimes forget it), practiced by human beings" (Gould 1977, p. 125). Echoing Steele's belief about science, Gould suggests that engaging in science both requires and also cultivates certain dispositions, including critical self-awareness, the capacity to live with uncertainty and doubt, and a willingness to accept the possibility that one's hard-won conclusions could be wrong. In this respect, science not only is an avenue for achieving knowledge. Engaging in science also can be personally transformative.

Post-Positivism and Education Research

Denis Phillips argues that the post-positivist conceptualization of physical science applies to norms and practices in *social* science, including educational research. Of course, social scientists pre-reflectively interpret the social worlds they reflectively study; research thus necessarily is mediated by the researcher's sociocultural situation. This fact, however, does not negate the possibility of studying the social world scientifically. Nor does it absolve social scientists from trying to achieve valid objective knowledge. Objectivity will not be "pure," and the truth of research conclusions cannot be guaranteed. But acknowledging the inevitable influence of lived understanding makes it more—not less—possible for fallible human beings to try and achieve rigorous knowledge of the social worlds they inhabit.

According to Phillips, the need to identify and agree upon standards to assess the objectivity and validity of research claims is the paramount task confronting educational researchers. All educational researchers must address this epistemological challenge, Phillips insists. Nevertheless, addressing this challenge poses different practical issues for quantitative and qualitative researchers.

For quantitative researchers, a key problem is to identify which variables are relevant and may need to be controlled. Given the complexity of the contexts in which education occurs, these judgments can be difficult to make. Quantitative researchers also must address the conundrum of how to make generalizations

meaningful for the complex, varied, and dynamic social contexts in which education occurs (Phillips 2014, p. 10).

People who are enamored of quantitative research sometimes forget or ignore these difficulties, Phillips notes, and expect quantitative research to provide foolproof solutions for educational problems. From a post-positivist perspective, this expectation is immodest and unreasonable. Numbers are not "brute" data; determining statistical significance is probabilistic and conjectural, not definitive. Moreover, quantitative research is not an unassailable formula for success (i.e., randomized field trials). Like all social science, quantitative methods depend on interpretive judgment. Denying this fact confuses science with fantasy and results in a phenomenon that Phillips (following Arthur Kaplan) calls "methodolatry" (Phillips 2006, pp. 25–26).

A different set of practical issues confronts post-positivist qualitative researchers. Qualitative researchers endeavor to interpret how "cultural insiders" interpret the meaning of their own experiences and contexts. Thus for qualitative research, interpretation is both the *focus* of research and also the *method* of research. The "doubly hermeneutic" character of qualitative inquiry raises the following sorts of questions:

- The meaning or purpose of an event, encounter, or experience can be difficult or impossible to construe outside the setting in which it transpires. Meaning, moreover, can vary from context to context. Are interpretations of meaning generalizable beyond the particular local contexts in which they arise? What does generalizability "look like" and require with respect to interpretations of contextual meaning?
- How should qualitative researchers think about objectivity in light of the fact that they are the "instruments" of inquiry (Wolcott 1997, p. 332) who not only observe contexts but also participate in them? How—and how much—can or should a researcher's own lived understandings be checked or controlled? Are there methods that can help researchers address challenges to self-reflection that arise in the field? If so, which methods should researchers adopt and under which circumstances?
- Do researchers' interpretive conclusions differ in important ways from interpretations that are articulated or assumed by the people whom researchers study? If so, what is the relationship between ordinary understanding and scholarly interpretive theory? Does scholarly theory illuminate or obscure quotidian understandings?

The plethora of responses to the National Research Council's 2002 report illustrates the conceptual complexity of these epistemological issues. But while the issues are complex, they must be addressed, Phillips concludes. Qualitative researchers, no less than their quantitative colleagues, must aspire to critically examine their assumptions in order to produce conclusions that are warranted by appropriate evidence.

Gadamer's Ontological Social Science

Embracing lived understanding, post-positivists significantly alter definitions of objectivity and truth. The post-positivist reconceptualization of epistemology and science is not a direct response to Dilthey. Had post-positivists responded to Dilthey, however, they might have said that he was stymied by an extreme view of objectivity (objectivism). They also might have said that he was seduced by the hubris that fallible human beings can definitively grasp truth.

Gadamer believes that Dilthey was stymied by a different set of beliefs. Specifically, two epistemological assumptions led Dilthey astray: (1) reflective interpretation and pre-reflective lived understanding are distinct; and (2) pre-reflective lived understanding is unreliable and therefore cannot be the basis for social science. Gadamer counters that pre-reflective understanding is not necessarily unreliable or erroneous. Rather, pre-reflective understandings ("prejudices," to use Gadamer's terminology) "are biases of our openness to the world. They are simply conditions whereby we experience something—whereby what we encounter says something to us" (Gadamer 1966/1976, p. 9). In other words, before we can explain a phenomenon, we must already have understood it on a pre-theoretical practical level. This does not mean that pre-reflective understanding always is perspicacious and cannot be narrowed or mistaken. On the contrary, Gadamer argues pre-reflective understanding *must* be critically questioned. But critical reflective understanding necessarily remains indebted to the pre-reflective understandings it clarifies and corrects.

Before discussing how Gadamer's beliefs about understanding shaped his views of social science, it is helpful to clarify what "science" means in the context of his philosophy. Like many continental European thinkers, science for Gadamer does not refer exclusively to the physical sciences or to the systematic observation of the empirical world. Neither does science exclude the humanities. Rather, science connotes reflective study in fields as diverse as theology, archeology, and politics. The term social science (moral science, human science) thus signifies reflective study of the human social world. But what does reflection in social science mean, exactly? Gadamer's answer to this question was heavily influenced by the work of his teacher, Martin Heidegger (1889–1976). To appreciate Gadamer's vision of social science, it is necessary to briefly explore its roots in Heidegger.

Heidegger

In his book, *Being and Time* (1927/1962), Heidegger probed two of Dilthey's important insights: (1) we experience the life that we pre-reflectively interpret; and (2) pre-reflective understanding exhibits a circular temporal structure. Dilthey believed that these two conditions are contingent and apply only to pre-reflective

understanding. Heidegger demonstrated that both conditions are necessary and characterize all understanding, including critical reflection.

Heidegger began by considering the question of existence. To exist, Heidegger reasoned, is to live in the present. As Dilthey showed, the present does not arise in a historical vacuum but instead always implicates the future and the past. Living in the present, we cannot help anticipate the future based on where we have been, even as our expectations for future experience color our understanding of the life we have lived. Heidegger used the term "historicity" to underscore the idea that human understanding is an *inescapably* temporal experience.

Insofar as understanding is an inescapably temporal experience, we do not choose to start (or stop) understanding at a particular point in (or out of) time. Rather, understanding is *a way of being* that always is already going on (to use Heidegger's phrase). It is true that understanding sometimes is mistaken. But breakdowns in understanding signify *mis*understanding, not an *absence* of understanding, according to Heidegger.

As an experience that is always already happening, understanding does not grasp the meaning of objects that are "present at hand," distinct from our interests and concerns. Understanding instead signifies being intimately involved with people and things. Our world is composed of implements that are "ready to hand," tied to our purposes, moods, interests, etc. Heidegger described engaged practical ongoing understanding in terms of "fore-having," "foresight," and "fore-conception." The prefix "fore-" signifies that we are able to engage with implements in our world because we pre-reflectively sense how they are implicated with our interests and how they fit within the context of meaningful relations in which we find them.

The fact that we pre-reflectively understand meaning does not imply that understanding is stuck in the past. Pre-reflective understanding can change as human beings move into the future, reconsider prior understandings, and anticipate new possibilities. Heidegger insisted that pre-reflective understanding could become critical and reflective. But critical reflection does not produce understanding where none had previously existed. Critical reflection instead remains indebted to the pre-understandings it clarifies and corrects.

Heidegger coined the term "thrown projection" to describe understanding as an experience of being involved in the world. The term "thrown" indicates that we do not construct the meaningful context(s) in which we live. Rather, we are born into a social world that is inherently meaningful and that already has been interpreted by others. Interpretation is possible, because the world discloses meaning through the medium of language. We inherit this social web of meaning as a linguistic "horizon" within which the construal of meaning for our own lives becomes possible. Heidegger's "projection" is not synonymous with "planning." Projection instead indicates that understanding is a dynamic experience of anticipating future possibilities. Because expectations for the future necessarily arise in the present, we cannot see them in their entirety or with absolute clarity. Moreover, while future possibilities are open, they nonetheless are partially circumscribed- by possibilities that already have been fulfilled.

The human being who experiences understanding as a cycle of "thrown projection" is *Dasein*, Heidegger said. *Dasein* means "there being." Unlike the

autonomous epistemological subject who leverages interpretation in order to grasp the meaning of objects (including objectified experiences), *Dasein* is not an independent agent who confronts discrete objects, the meaning of which he must deliberately choose to discover or construct. *Dasein* rather is "there" in the world, spontaneously involved with things that *Dasein* understands prior to any distinction between subjects and objects. *Dasein* does not initiate understanding and does not regulate the production of meaning. The fact of existing in an inherently meaningful and already interpreted world—not *Dasein*'s own initiative—is the condition that makes both pre-reflective and reflective understanding possible.

Gadamer's Social Science

Heidegger's claim that understanding is a temporally conditioned way of experiencing the world carries profound implications for social science, Gadamer concludes. He worked out these implications in his magnum opus, *Truth and Method* (1975/1989). Following Heidegger, Gadamer argues that interpretation in social science is a temporally conditioned experience or "event" we live through, not a kind of knowledge we achieve by methodologically regulating our life experience or by abstracting and justifying critical reflection outside of ordinary understanding. Understanding and interpretation in social science are no different from understanding and interpretation in daily life, Gadamer contends. In both cases, we experience understanding and interpretation as a dialogue or conversation.

The notion that social science is a conversation might seem startling. We typically think that social scientists collect and analyze data. But for Gadamer, people and texts are not data or "objects" in which meaning resides. People and texts instead are conversation partners who embody dynamic linguistic horizons that disclose meaning over time. Gadamer's social scientist starts to understand a text when she recognizes that it voices a question or issue that comes down through tradition and also concerns her. Similarly, the social scientist starts to understand another person, not because she empathizes with him or is able to leap out of her own body to get inside the other's head. Understanding instead begins when the social scientist recognizes that the question or issue that concerns the other person concerns her as well.

Of course, neither party in the conversation can escape the situation into which each has been "thrown." Understanding therefore does not aim to capture *the* meaning of a question. The meaning of a question rather is co-determined by the horizons of the conversation partners who interpret it. Insofar as horizons are temporal and change over time, the "same" question will be understood differently every time it is interpreted.

If we necessarily rely on our own horizon to understand an issue, how can we recognize the horizon of our partner? What prevents us from appropriating our partner's perspective or conflating it with our own? Gadamer proposes two answers. First, he notes that horizons are porous, not self-enclosed. In principle, therefore, horizons can interpenetrate.

Gadamer's second answer concerns the disposition of conversation partners. In a successful conversation, each party is open to the possibility that the other's perspective is true and may challenge and even refute one's own perspective. Gadamer insists that one's own perspective cannot be clarified or corrected as long as one entertains the other's perspective from afar and continues to maintain the truth of one's own position. Change instead requires one to *risk* one's assumptions and to actually *experience* the negation of one's understanding. Gadamer acknowledges that negative experiences are uncomfortable. But he maintains that negative experiences can be an invitation to critically reflect on one's prior understandings and realize new insights.

Thus, like pre-reflective understanding, critical reflection for Gadamer is an experience we undergo. In successful conversations, both parties are open to risking their assumptions. As a consequence of being challenged, the pre-reflective understandings of both parties can become more encompassing, perspicacious, critical, and reflective. Gadamer calls the reflective dimension of conversation a "fusion of horizons." Neither party can predict in advance how its horizons will be fused. When one party tries to direct the conversation or claims to know what the other is thinking, "talk" becomes something other than conversation (e.g., a lecture or a debate). But when a fusion of horizons genuinely happens, both parties come to understand a truth about life's meaning that neither party could realize outside of actually participating in the conversation.

In sum, Gadamer reframes social science in terms of a conversation that we experience with others. Gadamer's social scientist does not try to empathize with the people and texts that she studies. Neither does she regard them as exotic and distant. Rather the social scientist endeavors to recognize a question or issue that she and her partner share. The meaning of the question cannot be determined "objectively" but instead is co-determined by the horizon of both the social scientist and her partner.

The new insights that both parties realize in the course of their conversation also are co-determined and change with each interpretive event. New insight cannot arise if the social scientist attempts to regulate her self-understanding or keep it out of play. Gadamer's social scientist instead must allow her self-understanding to be affected by her partner, who presents a different and perhaps opposing perspective on the question that concerns them both. The partner's self-understanding is affected as well. Significantly, neither party can direct this experience or predict the new insight that a conversation will disclose. Both parties instead participate in a transformative event, the outcome of which neither can imagine in advance. Framing social science as a conversation that we necessarily experience with others can rehabilitate the moral dimension of the human (moral) sciences, Gadamer concludes.

A number of contemporary scholars are working to develop the philosophical and practical implications of Gadamer's social science. In his influential essay, "Interpretation and the sciences of man" (1971), Charles Taylor (1931–) argues that social scientists are "self-interpreting animals" who always pre-reflectively understand their theoretical conclusions and who inevitably appeal to intuitions and self-understanding to justify their findings. Ruth Behar (1956–) provides a practical

example of ontological social science. Behar's book, *The Vulnerable Observer* (1996), does not explicitly reference hermeneutics or Gadamer. Nonetheless, it argues that anthropological insight necessarily implicates the anthropologist's own self-understanding. The anthropologist's self-understanding, moreover, is vulnerable to (and affected by) the people whom she studies.

Jürgen Habermas (1929–) articulates a second response to Gadamer. Like Taylor and Behar, Habermas appreciates Gadamer's insight into the ontological nature of social science. Critical reflective understanding is irreducibly contextual, historical, and bound up with the interpreter's own self-understanding and presuppositions. The social scientist consequently belongs to the social world he interprets. Social science theories issue from the pre-theoretical practices they strive to explain.

But while Habermas agrees with Gadamer that critical reflection is connected to lived experience and understanding, he questions Gadamer's faith in the power of language and conversation to disclose truth and promote critical examination. Language is not simply a communicative medium for understanding meaning, Habermas argues. Material conditions and power interests can systematically and insidiously distort meaning in ways that language does not make apparent. Hence reflection must do more than simply *clarify* lived understanding by means of conversation. Critical reflection also must help people *distinguish* lived understanding from ideology. Becoming liberated from ideology requires methods and theories that can explain the genesis of distortion by rationally appealing to evident causes.

Gadamer's Ontological Social Science and Education Research

Few educational researchers explicitly reference Gadamer to describe their work. Nonetheless, it is possible to detect two Gadamerian themes in educational research. The first theme imagines research as a collaborative conversation. The second theme concerns whether and how a researcher's self-understanding is or should be implicated in his or her work. I will discuss each theme in turn, including questions and challenges for research that each theme raises.

Research Is a Conversation

Some scholars, including collaborative action researchers and those who engage in design experiments, argue that effective research is a collaborative conversation between researchers, community members, school personnel, and other stakeholders. Researchers and local actors participate as equal partners in conversations about the design, implementation, and evaluation of new understandings and findings. For example, questions must be of mutual concern to both researchers and local actors and must arise in contexts of practice. Questions will change and

evolve as researchers and local actors together arrive at new insights and clarify previously unforeseen problems. Kris Gutiérrez and William Penuel sum up this model of research. Focusing on design experiments, they write: "These models do not require researchers to specify ahead of time all the elements of an intervention, since practitioners participate in the design, and implementation data inform an iterative design process that often transforms interventions. It is important to ask, What is a partnership if the research plan is fully predefined by researchers?" (Gutiérrez and Penuel 2014, p. 21).

Conceiving of research as a collaborative conversation between researchers and local actors suggests new and interesting questions that Gutiérrez and Penuel do not consider. For example, if researchers and local actors are equal partners, what exactly distinguishes the perspective or horizon of researchers from the horizons of local actors with whom they collaborate? Does each researcher bring an individual horizon to the research conversation, or can we identify a perspective that is common to all (or most) researchers? What does developing a "research horizon" require?

Most significantly, Gutiérrez and Penuel make the *epistemological* assumption that specifying or developing specific *methodologies* is necessary in order to bring stakeholders together to deliberate problems that arise during research. Gadamer, by contrast, makes an *ontological* argument: successful research conversations cannot arise unless partners are open to *being affected* and possibly challenged by one another. The understanding that arises during these challenging experiences cannot be specified in advance. Insofar as method regulates understanding, relying on method may not facilitate research conversations, as Gutiérrez and Penuel assume. Relying on method instead may *prevent* mutual understanding from developing.

Some researchers argue that while collaborative conversation may be an ideal to which researchers should aspire, it is unclear how or whether this ideal should be enacted. Most university IRB regulations distinguish researchers from research subjects and stipulate that the rights of research subjects must be protected. This epistemological assumption makes it difficult if not impossible to approach research as a Gadamerian conversation that regards subjects and researchers as equal partners.

Other scholars raise questions about research as conversation, which echo concerns that Habermas voices. These scholars point to a legacy of privilege and marginalization and warn that seemingly openhearted conversations can exploit subjects. Relying exclusively on interpretation to examine social meaning thus is inadequate. The meaning of social practices instead must be interrogated and exposed through political struggle. Whether social science can accommodate political advocacy and remain a science is a compelling question for many educational researchers.

Scholars of color who conduct research in their home communities raise a third concern regarding research as conversation. These scholars discuss how their university status distances them from people with whom they were able to converse easily before they became researchers. For these scholars, the unforeseen insights that arise during research conversations can be experiences of alienation, not Gadamerian solidarity. (See, e.g., Villenas 2000).

Researchers' Self-Understanding

The second Gadamerian theme that is evident in educational research concerns the self-understanding of researchers. Michael Agar, an ethnographer whose work is familiar to many qualitative researchers, explores this issue. Drawing on Gadamer, Agar coins the term "rich point" to describe unexpected breakdowns in understanding. According to Agar, rich points present opportunities for ethnographers to question their *own* understanding and self-understanding. He writes: "The rich point, you assume, isn't *their* problem; it's *your* problem. The rich point doesn't mean that *they're* irrational or disorganized; it means that *you're* not yet competent to understand it. There is, you assume, a point of view, a way of thinking and acting, a *context* for the action, in terms of which the rich point makes sense" (Agar 1996, pp. 31–32). Whereas an epistemologically oriented ethnographer might work to *control* or at least reflectively account for his self-understanding so that he can accurately interpret his subject's understanding of the world, Agar's ontologically oriented ethnographer *engages* his self-understanding, allowing it to be (hopefully) transformed through the experience of being challenged by research participants.

While Agar argues that ethnographers must engage, not control, their self-understanding, he ultimately conceives of self-understanding in epistemological terms. Agar's rich point seems to apply only to ethnographers, not to research participants. Additionally, Agar develops a method by which ethnographers can surface, analyze, and address rich points. The epistemological assumption that researchers can and must reflectively account for and regulate their self-understanding continues to exert a strong hold, even on ontologically oriented scholars. It remains to be seen whether or how far educational researchers will take up the Gadamerian premise that research is an experience in which one's self-understanding is challenged in ways that the researcher cannot control or direct.

Comparing and Contrasting Post-Positivists and Gadamer

Acknowledging that interpretation is an ineradicable feature of social life, post-positivists and Gadamer reach a number of similar conclusions about social science. For both, social science is a human endeavor, undertaken by imperfect beings in cultural contexts, who critically reflect on unexamined assumptions to better understand their situation. Critical reflection both requires and also cultivates certain dispositions, including humility, openness to doubt, and a willingness to accept the possibility that one's understanding might be wrong. While critical reflective understanding is partial, fallible, and subject to revision, it nonetheless can be more perspicacious and less narrow or distorted than pre-reflective understanding. Engaging in social science for both post-positivists and Gadamer is a way of life that can be personally transformative.

These similarities regarding the practices and aims of social science are significant and tend to be overlooked. They derive from the fact that both post-positivists and Gadamer recognize the centrality of interpretation for human life and hence for social science. But while post-positivists and Gadamer agree that interpretation is central for social science, they nonetheless differ with respect to a central issue. This issue concerns the relationship between critical reflection and method.

Gadamer insists that critical reflection does not arise as a consequence of a social scientist's actions or intentions. Critical reflection rather is a fusion of horizons in which the pre-reflective understandings of both social scientists and those with whom they converse are challenged in ways that neither party can bring about or foresee. The fusion of horizons necessarily varies, depending on the time and place in which a conversation occurs and the particular parties whom it involves. In this respect, critical reflection according to Gadamer remains indebted to the circumstances in which it arises.

Thus for Gadamer, critical reflection does not require a specialized set of practices or methods but instead can and does arise in the course of everyday life. Believing that we need methods to help us reflectively clarify our situation distances us from our lived experience, Gadamer fears. Social science becomes an intellectual exercise, not an experience that *affects* people. In place of honing methodological expertise and skill, Gadamer wants social scientists to focus on their self-understanding, take risks with their conversation partners, and trust that new insight "happens to us over and beyond our wanting and doing" (Gadamer 1975/1989, p. xxvi).

Post-positivists such as Denis Phillips argue, *contra* Gadamer, that method supplies resources for critical reflection, which are not necessarily available to pre-reflective lived understanding. Employing method does not automatically bring about critical reflection or ensure that critical reflection will be correct. This is because method is susceptible to human interpretation and judgment and therefore cannot be reduced to formula or rules that researchers unthinkingly follow. Nevertheless, method can *support* critical reflection by providing guidelines and schema that can extend *beyond* particular research experiences and also across contexts.

In short, Phillips contends that claims about the empirical world must be distinguished from insights into the meaning of lived experience. The latter may implicate self-understanding. The former do not. Openness to being challenged may help social scientists recognize when their conclusions are wrong. But claims about the empirical world can be wrong, *whether or not social scientists acknowledge that their claims are wrong*. Claims about the empirical world can and must be assessed on their own merit, Phillips stresses, irrespective of their origin or the self-awareness of the researcher who produced them.

The difference between Phillips and Gadamer concerning interpretation, method, and critical reflection ultimately may reflect two different worries or fears. Viewing social science through the lens of post-positivist epistemology, Phillips worries about "confirmation bias," the inability to distinguish the conclusions of critical reflection from the pre-reflective beliefs and hopes social scientists

bring to research. Viewing social science through the lens of ontology, Gadamer worries less about the tendency to *conflate* reflective and pre-reflective understanding than about the possibility that social science will *alienate* social scientists from the ordinary life experiences they investigate. Both concerns have merit. It is possible that one concern may be more urgent than the other, depending on the nature of one's research questions, purposes, and circumstances. It also is possible that at any given time, both concerns may be equally salient. Wrestling with both of these possibilities will require educational researchers to continue to think deeply about the questions and challenges that interpretation poses for social science.

Conclusion

Examining the interpretive dimension of social science and educational research illuminates two views of interpretation: epistemological and ontological. While these two views share similarities, they also differ in significant ways and often conflict with each other. Some believe that conflicts between epistemological and ontological interpretation doom educational research to sloppy findings produced by a community in disarray. We take a different view. We argue that appreciating the challenges that interpretation poses for social science can inspire educational researchers to think deeply about profoundly meaningful questions. It also can invite all who are interested in improving education to continually reexamine and reimagine the practices and aims of educational research.

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