Introduction: Principles of a Human Sciences Approach to Research on Learning

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A central premise of this volume is that the study of human learning is best understood as a human science. The human sciences include academic disciplines in the social sciences and some of the humanities (e.g., history), as well as interdisciplinary fields like education, whose objects of study are human action in its various contexts. The term *human sciences* to describe these fields first appeared in the philosophical writings of Hume, but writers such as Dilthey (1883/1989) began to argue strongly for the need to distinguish the methods of human sciences from those of the natural sciences about the time that the modern social sciences began to emerge.

The original call for an explicitly human sciences approach to the social sciences was in part a reaction to Comte's (1848/2006) logical positivism, which embraced models of theory-building and research from the natural sciences as appropriate for the social sciences. A student from a different school of thought from logical positivism, Dilthey (1883/1989) wrote from the perspective of hermeneutics. Dilthey became one of the most well-known advocates for the need to define a distinctive humanistic, rather than naturalistic, approach to problems in

the social sciences. For Dilthey, the primary goals of social scientific inquiry were to interpret and understand human action, rather than to explain human behavior in terms of invariant laws of nature.

Today, researchers who characterize their research as belonging within the human sciences tradition draw from a diverse range of theoretical perspectives, including phenomenology, pragmatism, cultural-historical theory, and social practice theory. They share with the early writers a belief that social scientific inquiry should be aimed at interpreting human action in its many different contexts. At the same time, these researchers update the tradition of scholarship in the human sciences in that the theories they employ consider more fundamentally the powerful role that social practices and contexts play in shaping the meanings people make of their action and consider ways that human sciences researchers may act, both explicitly and implicitly, to inform and participate in efforts to improve the human condition. These authors enjoin researchers to make explicit the particular *teloi* or goals for learning implicit in particular curricula, schooling practices, and research itself and to engage in debates about these *teloi* as participants in the very worlds of practice we seek to change.

What we are calling a human sciences approach resonates with some recent calls for different approaches to social sciences research. In their efforts to make explicit, and engage in debates about, the purposes of learning and learning research, for example, human sciences researchers contribute to what Howe (2003) called a "democratic educational research" agenda in which the values that inform debates over education become the objects of both investigation and deliberation. In addition, several of the human sciences researchers in this volume also seek to improve learning by developing case accounts of particular situations that answer questions that can guide or inform wise, practical action. In this way, human sciences researchers are engaged in what Flyvbjerg (2001) has called, borrowing from Aristotle's notion of *phronesis,* a "phronetic social science."

Martin Packer's (2010) chapter, which opens our Yearbook, synthesizes several themes of contemporary human sciences research that inform many of the other chapters, showing how they cohere and can guide future research. Packer's position is practically oriented and moves beyond Dilthey's romantic view that science can completely recover another's subjective experience. Packer's vision of a human science is one that involves the study of the "mutual forming of human beings and our forms of life." Human beings don't act or conduct research apart from and in relation to an objective reality as neutral or even partial observers; rather, they are *participants in* the crafting of their own lives

and the forms of life of the "activity systems" (Engeström, 1999) in which they participate.

We cull many of the themes and assumptions articulated by Packer into what we characterize as principles of a learning sciences approach. We summarize those principles next, and in subsequent sections we elaborate on these fundamental principles, identifying some of their sources in philosophy and the social sciences and describing how each of the authors in the volume applies or extends these principles in his or her respective chapter. The principles as we have articulated them are:

1. *Foregrounding values:* Interpretive accounts of learning foreground considerations of value from participants' points of view in situations in which values are judgments that inform participants' actions.
2. *Interpreting the scope and limits of agency of learners and researchers:* Interpretive accounts of learners by learning researchers should focus on both the possibilities and limits of human agency, that is, the goal-directed activity, of individual learners in their situations and the agency of researchers in constructing accounts of learning.
3. *Postulating the* teloi *of learning:* Human sciences researchers seeking to inform efforts to improve learning must make explicit the *telos* (endpoint or ultimate goal) or *teloi* of those efforts. Researchers must also develop awareness of the implicit *teloi* of their own research endeavors and make them explicit to themselves and others.
4. *Locating and expanding responsibility for postulating* teloi: Human sciences researchers seeking to improve learning must locate where power to decide the *teloi* of learning within particular situations resides and seek to broaden participation in and responsibility to include learners and practitioners who are traditionally excluded from such deliberations.

FOREGROUNDING VALUES IN INTERPRETING LEARNING

A first principle of a human sciences approach for learning research is that interpretations of learning in particular situations should foreground the values implicit or explicit in those situations. Values here refer to subjectively experienced qualities of a process, an outcome, event, tool, or the like that make it important for a person, group, family, or community in relation to action (Pea & Martin, 2010). The emphasis on accounting for values in accounts of human action is a fundamental aspect of the contemporary "interpretive turn" in the social

sciences (Rabinow & Sullivan, 1987), which recognizes that human beings exist "inescapably in a space of ethical questions" (Taylor, 1992b, p. 305). As human beings who are also scientists, we find ourselves confronted by ethical questions about our roles as researchers in informing practice and about how we ought to do research. We assess ourselves in relation to the answers we give to these questions. Further, our characterizations, as educational researchers, of people's motives and actions, particularly with respect to educational strategies, programs of reform, and the quality of educational experiences, are laden with values and judgments about our object. Such values depend on our vantage point, our life experiences, and the opportunities and constraints of the situations in which we find ourselves conducting research.

Ways of distinguishing appropriate from inappropriate forms of action in promoting learning and human development arise within practices of learning in, around, and outside schools and are not particular to researchers' activities (Bourdieu, 1977; Lave, 1996; Miller & Goodnow, 1995). Implicit in the social practice of schooling are certain visions of the "educated person," including how the educated person is expected to relate to others and to society more broadly (Levinson, Foley, & Holland, 1996). Schooling in North America, for example, requires that students develop the disposition to put their best foot forward when posed questions by teachers, displaying what they know through oral and written expression; by acting on these dispositions, students show not only that they know what is expected, but also that they are capable of following directions. For some groups of students, the development of these dispositions is supported by a variety of communicative practices at home and in their neighborhoods; for other groups, as a number of seminal studies of participation in school have found, these dispositions run counter to cultural norms and ideals of personhood and how best to communicate with others (Gonzalez, Moll, & Amanti, 2005; Gutiérrez, Moraliz, & Martinez, 2009; Heath, 1983; Lee, 2001; Philips, 1983; Scollon & Scollon, 1981).

The social practice of schooling and its associated visions for the educated person also imply different potential trajectories or social futures for the person, trajectories that define what it means to succeed or fail in school (Varenne & McDermott, 1998). Being unable to sit still for long periods of time through lessons, for example, often occasions discussions of whether a student has an attention deficit that requires remediation or even medication; rarely, however, does it occasion discussions of the vision of school that necessitates that students, at even young ages, sit still for long periods of time (Gee, 2000–2001). Of course, sometimes actors

contest the values that are reflected by certain social practices and cultural models for action (D'Andrade & Strauss, 1992). Parents challenge teachers' diagnoses or assessments of children; school reform groups contest the values implicit in particular curricula; teachers resist reforms that employ strategies or focus on goals they believe are ineffective or not worthy.

The theme of values informing action is taken up explicitly within Roy Pea and Lee Martin's (2010) chapter in this Yearbook. Pea and Martin explore how values become occasions for families to engage in mathematical activity, that is, to connect everyday experience to topics, operations, and contexts that might otherwise be linked to school-based practices. Values, in Pea and Martin's formulation, are subjectively experienced qualities of something such as an outcome, a process, an event, a strategy, a resource, a tool, or the like. This work presents an example of what Taylor (1985) argued is a fundamental task for the human sciences, making sense of the meanings that situations hold for the actors who are acting in them and who are constituting them as they act. The work also extends earlier studies of mathematics that arise within everyday social practices, such as grocery shopping (Lave, 1988), by showing how family members playfully adapt school practices of mathematics outside school settings in the context of formulating and solving problems.

INTERPRETING THE SCOPE AND LIMITS OF AGENCY OF LEARNERS AND RESEARCHERS

The concept of agency refers to the capacity of human beings to act; it is a slippery concept that takes on different meanings in different disciplines and traditions of thought. Implied in the human sciences focus on human values, for example, is the philosophical notion that human beings are moral agents who choose and are responsible for their actions and, to some extent, the consequences of those actions. Fundamental questions that follow from a belief in moral agency are—with respect to a particular policy or program of change, whether in education or some other setting—"Who benefits?" and "Who suffers?" (Flyvbjerg, 2001). Within sociological writings and social practice theory, agency has taken on different meanings. Marx, for example, viewed the capacity to act as a capacity of the collective rather than the individual, but other sociologists have used the term *agency* to refer to the process by which individuals alter social structures and practices, even when they do not intend to do so (de Certeau, 2002; Giddens, 1979). In these latter conceptions, which are reflected in a number of chapters in this volume, the possibil-

ities inherent in the human capacity to act, the limitations of individual agency, and the reciprocal relationship between agency and structure are emphasized.

The idea that human agency contains possibilities but also is bounded finds clear, early expression in the writings of the literary analyst M. M. Bakhtin, who observed that the words we utter are always in some sense borrowed from the cultures and communities of which we are part and at the same time are "populated with our own intentions" through our intonation and signaling of our orientation to the words we speak. More recently, sociocultural researchers in psychology in education (Wertsch, 1991; Wertsch & Rupert, 1993) and sociologists of science (Lynch & Woolgar, 1990) have argued that human agency is always mediated by tools and artifacts of various kinds, including language, that are typically not of our own making or entirely within the control of individuals who appropriate those tools in the exercise of their capacity to act.

Certain social categories, such as those of gender, sexual orientation, disability status, and race, also carry meanings not within the control of the agent that can enable and constrain students' opportunities to learn, depending on their membership in these categories. Na'ilah Suad Nasir's (2010) chapter explores the role that identity plays in shaping the educational experiences of African American students. Nasir's chapter explores the problem of how analyses of identity in learning should consider both participants' own identifications and those of others (including teachers and researchers) in producing accounts of identity. Sunil Bhatia (2010) takes up similar themes in his chapter, focusing on the identities available to and taken up by Somali immigrants to Canada. His interpretation of recent writings about youth experiences of immigration considers the problems that youth face in confronting racial identities in North American terms that are alien, given their life experience, but that they are forced to define by their new situations.

When individuals or groups seek to break past ways that others identify them, whether by deflecting demeaning representations or by embracing new forms of self-identification, they cannot do so successfully without recognition by others under circumstances outside individuals' control (Taylor, 1991, 1992a). Achieving new self-identifications is made all the more challenging because alternative identifications that are supported by dense networks of social practices, artifacts, and tools come to be defined as dominant identifications salient for a particular individual or group (Callon & Law, 1997; Nespor, 2004). A human science perspective suggests that these alternative identifications can develop venues, institutions, artifacts, and collective histories that can mobilize allies and help to organize activity. Only when these outcomes occur do such identifica-

tions have the potential to gain recognition as legitimate alternative forms of self-identification. Furthermore, for recognition to occur, it might be necessary that the dominant groups in a particular society or nation-state come to recognize that the collective histories of particular groups and their cultural traditions have something to offer the society and humankind as a whole (Taylor, 1992a).

Two chapters in this volume take up the limitations of individual agency from a human sciences perspective on research on learning. Reed Stevens's (2010) chapter challenges the notion of what it means to rely on a "member's perspective" on events and situations in the context of learning in and out of schools. This chapter argues that adequate accounts of learning require analysts to consider how learners, within particular situations, construe and orient to particular activities as "learning events," going beyond externally defined measures of learning that characterize much contemporary assessment and evaluation practice. The chapter by Bud Mehan, Amanda Datnow, and Lea Hubbard (2010) focuses on how the agency of program developers, policymakers, and researchers seeking to change schools is constrained by organizational and institutional processes of schools. They offer an alternative to the implementation of change from a "fidelity" perspective (e.g., O'Donnell, 2008), arguing that school change processes are co-constructed by policy makers, researchers, educational leaders, teachers, parents, and students.

Other chapters in this volume consider how the practices of research on learning can and should be expanded on the basis of considering the capacity of individuals to direct individual learning, determine the fate of policies and programs, and make do in difficult circumstances. Brigid Barron's (2010) chapter takes up the implications of considering learning as a "lifelong, life-wide" phenomenon, not bounded by school. Her chapter calls for more explicit attention in learning research to how students pursue and sustain engagement in learning activities and develop skills across time and multiple contexts. William Penuel's (2010) chapter contrasts objectivist approaches to evaluation, which position evaluators and evaluation as key arbiters of the efficacy of programs, with a more dialogic approach, which enjoins evaluators to anticipate divergent voices and incorporate them into communication of evaluation results. Penuel argues that a dialogic approach to evaluation captures the diverse voices of different characters and their respective values, interests, and situations. In a similar vein, Ray McDermott's (2010) chapter explores how particular genres of writing about education produce radically different accounts of how children learn. He argues that research accounts are particularly impoverished with respect to their representations of people at the "bottom" of the social structure when compared to novels,

which portray protagonists as resourceful and resilient in the face of obstacles and which pay close attention to how individuals adapt creatively to the particulars of their situations.

ARTICULATING THE TELOI OF LEARNING

As researchers in the sciences of learning, whether approaching learning from within a natural science, a design science, or a human science perspective, we are rarely content to produce descriptions of learning in different settings solely for the purpose of advancing scholarship. In other words, most of us in some form or another are engaged in efforts to inform and/or help create particular policies, programs, and curricula. In this respect, a human sciences approach does more than answer the question "Where are we going?" in critiquing current learning arrangements; it also takes as focal the question "What should be done?" (Flyvbjerg, 2001).

Certainly researchers who advocate for a strong role for experimental research in education (e.g., Cook, 2002) and who hold ontological and epistemological commitments that are quite different from the ones articulated in this volume also see a role for practical action. Their argument, though, is that "what should be done" should be determined through a process of discovery, by following particular methods of research to determine precisely what works to improve teaching and learning (e.g., Borman, 2002; Cook, 2002; Dynarski, 2006; Luce & Thompson, 2005). By contrast, a human sciences perspective assumes that the value or worth of a program, learning environment, or system of education cannot be discovered because the value and worth of a program depend on the value and worth of its aims, a more fundamental matter that cannot be determined by evidence alone. One does not so much establish the value and worth of a program's aim as posit particular aims as worthy, invoking different value schemes in doing so that will inevitably appeal to some but not to others (e.g., "back to basics" approaches may appeal to some parents who believe in these aims but not to self-described progressive educators who view these approaches as an anathema).

The view that the *telos* or ideal endpoint of learning and development is a concept researchers postulate rather than discover is central within the psychological writings of theorists such as Piaget, Werner, Kohlberg, and Vygotsky. All these theorists posited different *teloi* for learning and development (though they defined learning and development differently), in which the "stages" of development they defined logically followed from, rather than built up to, those *teloi* (Gilligan, 1982). Kaplan

(2005) argued that the notion that development is a "concept by postu-lation" was central to Werner's psychology, that is, that Werner's notion of development "was a *form* or *schema* for selecting, interpreting and orga-nizing phenomena. In other words, *development* was not an object in the Book of Nature, but was a way of looking at and describing events, a way of organizing the manifold of phenomena" (p. 154).

If in fact all designs for learning aim at some particular vision for how people ought to become scientists, historians, citizens, or another kind of person, then adopting a human sciences perspective requires us to be explicit about our *teloi* so that we may open ourselves to critique as to the worth or value of those *teloi*. The idea of making explicit and expanding *teloi* for learning is one that has motivated the programs of research for a number of researchers who are contributors to this volume. The chapter by Kevin O'Connor and Anna-Ruth Allen (2010) addresses this issue explicitly. They draw on a study of an out-of-school slam poetry team in a U.S. city to examine how learning becomes consequential for the social futures of team members and others like them. Learning, in this account, is a collective accomplishment that is a matter not only of gaining partic-ular knowledgeable skills, but also of producing the conditions under which the expressions of voice that are undeniably enabled by the work of the poetry team and their coaches can become recognized as valuable. O'Connor and Allen go on to draw out implications for learning research in classrooms with more "traditional" subject matter. Just as learning in the context of the poetry slam requires organizing work at different timescales and different locations, so too does learning in classrooms. Part of the role of learning research is to trace these orders, as Packer (2010) puts it in his chapter, by which participation is made to be conse-quentially successful or not.

The chapter by Line Lerche Mørck (2010) similarly explores the processes of organizing learning contexts, drawing on the ideas of learn-ing by expanding, as articulated in the writings of Yrjö Engeström (1987). Mørck portrays the trajectories of social street work in a multiethnic neighborhood of Copenhagen, Denmark, over the course of two decades, showing how these trajectories offer legitimate positions for youth at the margins of society—margins from which these youth learn by finding innovative pathways through dilemmas of ethnicity and reli-gion to create new possibilities for action. Mørck's account reminds us that agency for change is fundamentally a social process, one that involves both resistance to marginalization as well as creative transforma-tion of community institutions and possibilities for recognition of the contribution of individuals on the margins of society.

LOCATING AND EXPANDING RESPONSIBILITY FOR DECIDING THE TELOI OF LEARNING

Locating responsibility for positing *teloi* for learning within the scope of learning research raises the important question, "Who decides?" If "what ought to be done" to improve outcomes of learning is in fact posited by researchers rather than determined by the rigor of their methods, then we are necessarily open to critique from those for whom we design and study. As such, fundamental to the work of changing systems is considering how we situate our practice within broader systems of relations, including how we develop the relationships that we posit should exist between researchers and practitioners, between teacher educators and educators, and between researchers and youth. From a human sciences perspective, the ideal is for researchers to get "close to the phenomenon or group whom one studies during data collection, and [to] remain close during the phases of data analysis, feedback, and publication of results" (Flyvbjerg, 2001, p. 132). Several chapters in the second half of the volume articulate different ways of relating to people who enact designs for learning (e.g., teachers, administrators) and to people who are expected to be their beneficiaries (e.g., students and other youth).

Three chapters discuss different ways of conceptualizing researchers' relationships to practicing educators and administrators. In her chapter, Nancy Ares (2010) explores the relationships among researchers, educators, and students engaged in a shared endeavor to draw more on students' "funds of knowledge" (Gonzalez et al., 2005; Moll, Amanti, Neff, & González, 1992; Moll & Gonzales, 2004) in mathematics class. She describes the potential for doing violence to these funds of knowledge by assimilating them into school without considering the broader social practices in which particular "authentic" activities are embedded. In their chapter, Leslie Herrenkohl, Lezlie DeWater, and Keiko Kawasaki (2010) describe what can be learned from partnerships developed between individual teachers and researchers that are focused on ongoing inquiry into teaching practice. Mutual transformation of goals is a central theme in this chapter, in which each member of the group influences what the others consider to be important questions and goals to pursue. Catherine Lewis, Kiyomi Akita, and Manabu Sato (2010) describe the process of lesson study and situate it within the broader context of relations that exist between researchers and educators in Japan. Their chapter presents a vision of inquiry into teaching based on reflexive examination of how well live lessons achieve group-defined *teloi* for learning. These three chapters' perspectives are significant in that they challenge a division of

labor that has existed in education for decades. This division of labor puts various intermediary organizations and actors, including researchers, in the role of designing *for* teachers, who are expected simply to implement designs (Engeström, 2008; Tyack & Cuban, 1995). Although this division of labor has produced designs that are powerful in terms of their potential for fostering new forms of learning, they are designs that often prove to be unusable or of limited value to educators (Fishman, Marx, Blumenfeld, Krajcik, & Soloway, 2004) and that, as Herrenkohl and her colleagues point out, have become institutionalized in ways that present challenges to efforts to work outside of their structures.

   Two chapters further challenge notions that young people themselves should be excluded from the process of setting *teloi* for learning; rather, these authors argue, young people must be participants in defining and working toward new aims and designs for learning. Ben Kirshner's (2010) chapter elaborates on a framework for youth-led participatory action research and describes how he has applied this to the study of school closures and their impacts on youth. His chapter, while offering an expanded role for young people in inquiry and social action, warns against romanticizing and reifying "youth voice." Rather, he describes challenges that can arise when researchers engage in research and activism at the same time. In their chapter, Suzanne de Castell and Jennifer Jenson (2010) also report on a research project in which they engaged young people as coinquirers in research. They feature work done collaboratively with gay, lesbian, bisexual, transgender, and questioning youth, and their chapter highlights the opportunities and challenges of working with young people from marginalized groups.

READING AND USING THIS VOLUME

The arc of the argument we have just presented serves as the basis for how we have organized this volume. The early chapters consider *how things are now,* from a human sciences perspective, whereas the later chapters represent different images for *how things ought to be* with respect to learning research. Our chapter authors do not offer a single method for research on learning but, consistent with researchers from other disciplines in this tradition, suggest strong links to philosophy and to the world of practice. Each chapter presents the roots of the approach, with the intent of providing readers with the intellectual traditions that inform this work, and the authors also present their own *teloi* for research as a way to advance the field. Readers will find that each chapter stands

on its own but also contributes to the overall argument in the volume for a human sciences approach and points to traditions to which the scholarship belongs.

From our perspective, this volume will also have achieved its aims if we succeed in posing questions that strengthen the hand of contemporary debates on educational research represented here and that provoke new lines of thinking and research. We recognize that success in this endeavor is up to readers; we are only contributors to an ongoing dialogue. But it is our hope that the questions we pose provoke, disturb, or unsettle readers just enough to inspire them to ask new questions and engage in the practice of learning research in new ways.

We hope also that readers will use the empirical illustrations and cases presented in each chapter as exemplars of the principles outlined in this chapter. The four principles—foregrounding values; exploring agency; articulating *teloi* of particular learning policies, programs, and reform efforts; and locating and expanding responsibility for articulating those *teloi*—will remain for readers hopelessly abstract without these exemplars. By no means are these the only possible exemplars of those principles; the work ahead to advance learning research as a human science requires us to find additional examples that push our thinking forward, using our capacity for self-reflection and critique to propel us not only toward a more democratic practice of research, but also toward a better, more democratic future for learners.

Acknowledgments

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