

Claiming the Cultural Space of the Classroom

Issues of Ethics and Social Justice¹

David Kirshner
Louisiana State University

Paper Presented at the Annual Meeting of
American Educational Research Association
New Orleans Louisiana
April 9, 2011

Abstract

Issues of social justice are accorded scant space in the professional scope of most teachers. The purview of ideologues and do-gooders, social justice would seem to have little to do with practical, everyday teaching of subject matter content. This marginalization of social justice is supported by a traditionally individualist psychology that constructs learning as internal, rather than as part of a relationship to society. To the extent that cultural theory is recognized as relevant to learning, it is caught up in complex entanglements with other theories, rendering implications for social justice opaque and conflicted. The current paper untangles the learning metaphors that ground educators' interests in teaching, homing in on learning-as-enculturation, and issues of ethics and social justice attendant thereto.

“This paper takes up the issue of the ‘outcomes question’ ... arguing the case for a strong focus on social justice as the necessary *complement* to an ongoing concern with academic excellence and rigor.”
(Cochran-Smith, 2004, p. 193, italics added).

Objectives:

As the Cochran-Smith quote illustrates, issues of social justice (at best) are complementary to the teacher's daily concern for achieving the prescribed learning outcomes of the curriculum. This is not surprising given the domination of psychology by individualist perspectives (e.g., behaviorism, cognitive psychology, and developmental psychology) that take learning as internal to the child, rather than as being in relation to society. In fact, a veritable forest of theories have risen to importance in recent decades in which “processes, such as the mind and the self, [are viewed] as phenomena that are socioculturally constituted—that is, actually made up within, as opposed to merely facilitated by, culture and society” (Kirschner & Martin, 2010, p. 1). However, teaching is typically understood as acultural, a technical practice designed to promote learning understood as an accomplishment at the individual level (Barab et al., 1999; Pressley & Roehrig, 2003; Vågan, 2011).

¹I am grateful to Mary Hamilton for raising the issues addressed in this paper.

Interestingly, Cognitive Science—the dominant school of psychology in the current era—does not take an antagonistic stance toward sociocultural theorizing, notwithstanding its historical grounding in the computational metaphor for cognition as in-the-head mental processing (Bransford, Stevens, et al., 2006; Sawyer, 2006). In fact key educational psychology texts, including *How People Learn* and *How Students Learn* (see Bransford et al. references), make frequent reference to Vygotsky, situated cognition, distributed cognition and other theoretical works that take culture and society as the crucible of learning. But there is no compelling insight within cognitive science to guide how a social ontology of learning can mesh with the tradition of in-the-head cognition (Kirshner, 2008; Dupuy, 2000). As a result, there are few resources provided to redirect educational practice away from the traditional individualist view.

The current paper is part of a body of work that stakes out a new response for education to the paradigmatic diversity of psychological theorizing. Historically, educators have adopted one of two approaches, both unsatisfactory: ignoring the problem of scope, accept a single theoretical paradigm as providing definitive guidance of education (for example, behaviorism, through much of the early/mid part of the last century); or, ignoring the problem of coherence, subscribe to an eclectic mix of theoretical perspectives (for example, cognitive science in the current era).

The *crossdisciplinary* approach, advanced in this paper, dispenses altogether with the ideal of a unifying psychological paradigm for education (Kirshner, 2002, 2004, 2008, 2010). Rather, educational practice is seen as motivated by 3 distinct metaphorical interpretations of learning: learning as *habituation*, subserving the pedagogical interest in skills; learning as *construction*, subserving the pedagogical interest in concepts, and learning as *enculturation*, subserving the interest in dispositions (cf. AERA, 2005; NCATE, 2002, “knowledge, skills, and dispositions”). These metaphors for learning are informed by various psychological paradigms—behaviorism and implicit learning theory for habituation, Piagetian developmental psychology for construction, and sociocultural theory and social psychology for enculturation. However, there is no attempt or expectation that these notions of learning be theoretically integrated. Rather, each is an independent platform for pedagogical theorizing. Thus the teaching of skills, of concepts, and of dispositions are framed as separate *genres* of teaching, each supported by an intellectual framework informed by one or another psychological theory. This is very different than the traditional framing in which “good teaching” is taken to be an integrated set of practices, albeit complex and multifaceted (Bransford, Stevens, et al., 2006).

In isolating enculturational teaching as a distinct genre, we have an opportunity to focus on the mechanisms through which classrooms can function as cultural settings within which dispositions are inculcated through the deliberate efforts of a teacher. The culture of the classroom therefore emerges as a dedicated pedagogical resource, and working with it should be part of the professional expertise of every qualified teacher. However, cultural change may involve cultural identity, and setting out to influence cultural affiliation has ethical implications that are widely held to be important for education (Aikenhead, 1997; Atweh, Forgasz, & Nebres, 2001; Brown, 2004; D'Amato, 1992; Delpit, 2006; Freire, 2006; Gutstein, 2003; Kincheloe & Steinberg, 2007; McCarthy, 1993; Moses & Cobb, 2001; Sampson, 1993). It is these implications—of direct relevance to teachers in their primary role of supporting learning—that are explored in this paper.

Theoretical Perspective:

The genres approach to teaching violates deeply entrenched practices of pedagogical theorizing rooted in the sociological constitution of Education and Psychology as historical enterprises. My perspective, here, is grounded in the sociology of scientific knowledge (SSK) which studies the sociological and historical imperatives that shape the intellectual content of fields of study (Collins, 1983; Pinch, 2007; Whitley, 1972).

Psychology is a preparadigmatic science (Flyvbjerg, 2001), with learning diversely theorized across major subfields (behavioral, cognitive, developmental, sociocultural). The central historical imperative of preparadigmatic science is to establish a paradigmatic consensus that unites the field and advances it to the status of a mature science (Kuhn, 1970). Consequently learning theorists of all affiliations operate from the premise that a single perspective (eventually) encompasses all of the relevant phenomena of learning. This premise—reflecting the aspirations of psychology, rather than its actual accomplishment—is endorsed by educators due to the historic subservience of Education to Psychology (Lagemann, 2000). The subservience can be traced back to the critique of transfer of training assumptions of *faculty psychology* (e.g., Thorndike & Woodworth, 1901) which effectively dislodged the existing foundations for educational practice (Hall, 2003; Hilgard, 1996).

The consequence of reifying learning as a unitary or integrative process is that “good teaching”—teaching that supports learning—gets constructed as a self-consistent set of practices. This introduces a debilitating mismatch between pedagogical recommendations which are holistic and our intuitions about learning (captured in the trio of metaphors described above). It makes it impossible to formulate pedagogical principles that explicate how teaching is intended to support learning. Instead, educational discourse is rife with platitudes, with grand visions, and with vignettes that illustrate good teaching, punctuated by intractably dense dialectical analyses meant to close the gap between as yet unreconciled intuitions. We are nowhere near being able to meet the challenge that Greeno, Collins, and Resnick (1996) posed, “not just to provide inspiring examples, but also to provide analytical concepts and principles for people who wish to use the examples as models in transforming their own practices” (p. 41). The crossdisciplinary approach provides pedagogical recommendations for genres of teaching that correspond with our intuitions about learning. This provides for a more intellectually grounded and rigorous pedagogical practice.

Mode of Inquiry and Data Sources:

The theoretical work of crossdisciplinarity is to articulate interpretations of learning as habituation, construction, and enculturation that constitute our cultural commonsense about learning and underlie our efforts at pedagogical theory and practice. Fortunately, there are psychological paradigms that pursue closely related interests, for as Fletcher (1995) noted, our culture’s “folk psychology is built into scientific psychological theories in a more thoroughgoing fashion than is commonly realized” (p. 97). However, the preparadigmatic interest of psychology is to span and ultimately unite the broad interests in learning. Thus psychological theory tends to move in the wrong direction, away from simple but local characterizations of learning that

initially inspired the paradigm, toward complex interpretations that seek to bridge disparate intuitions (Author, 2008). As a result, the use of psychology is highly selective, calling only on those theories that most effectively highlight a single metaphorical notion of learning, often relying on earlier, more narrow, versions of the theory over contemporary forms. In crossdisciplinary research, it is educators, rather than psychologists, who have the primary responsibility for framing the models of learning to which teaching aspires. Yet psychology is an invaluable resource. The current paper explores learning as enculturation.

Results: Dispositions, Enculturation, and Acculturation

I take enculturation to be the process of acquiring dispositions through enmeshment in a cultural community. I interpret dispositions broadly as tendencies to engage with people, problems, artifacts, or oneself in culturally particular ways. The likelihood of acquiring a disposition may be influenced by genetic predispositions. For instance, one might say of someone they have a predisposition toward logical thinking, or they're naturally inclined to be shy. However, predispositions to engage only find expression as dispositions within the context of culture.

Note, this interpretation of dispositions differs from the more typical cognitive science rendering in which forms of cognitive engagement are naturalized as capabilities of the cognitive apparatus (e.g., critical thinking, metacognition, general problem solving strategies) (Greeno, Collins, & Resnick, 1996). Dispositions, thus, are reduced just to inclinations or tendencies to employ those capabilities. For instance, Perkins and Ritchhart (2004) present a framework for good thinking based on "viewing dispositions as initiators and motivators of abilities rather than [thinking] abilities themselves" (p. 179). Instead, I adopt Vygotsky's (1981) sociogenetic view that, "the very mechanism underlying higher mental functions is a copy from social interaction; all higher mental functions are internalized social relationships.... Their composition, genetic structure, and means of action—in a word, their whole nature—is social" (p. 164).

In thinking about the process of enculturation it is useful to consider the example of proxemics, or personal space, as explored by social psychologists (e.g., Hall, 1966; Li, 2001). Proxemics, is the tendency for members of different national cultures to draw differing perimeters around their physical bodies for various social purposes. Thus, natives of France tend to prefer closer physical proximity for conversation than do Americans (Remland, Jones, & Brinkman, 1991). I count coming to participate in this cultural norm a particularly pure instance of enculturation because it is accomplished without volitional participation. Generally people within a national culture acquire proxemic dispositions through cultural enmeshment without intending it, and even without awareness of the cultural norm.

This pure form of enculturation is possible in a unitary culture in which only a single dispositional variation is present. However, one also can come to be enculturated into a subculture whose dispositional characteristics are distinctive among a range of other subcultures' (e.g., being a scientist, being a punk rocker). In such instances, inductees often seek to actively acculturate themselves to a subculture, thereby bringing volitional resources to acquiring the subculture's dispositional characteristics (Berry, 1980). I define *acculturation* as intentionally "fitting in" to a cultural milieu by emulating the cultural dispositions displayed therein. However,

this process needs to be understood as supplementary to the more basic unconscious processes of enculturation going on around it all the time (Parsons, 1951). As Omar (2010) explains, for norms to be “normative” they have to be unconscious:

Parsons defined “internalization” as “unconscious introjection” which meant that if an actor was socialized into a norm, then the actor was unconscious of how that norm determined her conduct. In essence, the Parsonian socialized actor cannot take norms as an object of reflexive consideration and strategization, for if that were the case then the norm would lose its status as “normative” and would become just another instrumental resource for action.

It is worth noting that the unconscious dimension of cultural adaptation has not been influential in thinking about educational processes (e.g., Brown, 2004; Rubin, 2007; Vågan, 2011). Acculturation involving intercultural relations is the more salient concern, the term first arising in sociology in the 19th century (Powell, 1880). “Enculturation” was not introduced for another 75 years (Herskovits, 1955). We observe that even as linguistics transitioned from a concern for irregular constructions to underlying regularities (Chomsky, 1957), the anthropological study of acculturation may be undergoing an analogous shift (Kirshner & Meng, in press).

Enculturation and Acculturation Pedagogies

The enculturation/acculturation distinction points to two pedagogical strategies that can be discerned in the education literature (see Aikenhead, 1997, for an eerily similar analysis). Both begin with the teacher identifying a reference culture and target disposition(s) within that culture. Thus teaching dispositions is always overtly about enacting a cultural agenda.

Enculturationist pedagogy focuses on shaping a classroom microculture so that it comes to more closely resemble the reference culture with respect to the target dispositions. Through subtleties of attention and encouragement the teacher, over time, exerts considerable influence on the modes of engagement manifest within the classroom microculture. Thus through the same kinds of unconscious processes that shape proxemic dispositions, students come to acquire approximations of the target dispositions through their enmeshment in the surrogate culture of the classroom. Yackel and Cobb (1996) clearly articulate an enculturationist pedagogical agenda in their discussion of *sociomathematical norms* as the targeted dispositions of mathematical culture (e.g., the preference for mathematically elegant solutions) that come to be “interactively constituted by each classroom community” (p. 475).

The conundrum of enculturationist pedagogy is how does one grow target dispositions that are not already present in the classroom microculture? This is necessarily a progressive agenda in which modes of engagement initially encouraged by the teacher reach a level of general currency in the classroom microculture, eventually to be replaced by yet more sophisticated forms of engagement. For instance, a teacher who seeks to foster abstract forms of logical argumentation associated with mathematical culture initially may encourage empirical justification over argumentation based on deference to authority, only later to discourage empirical justification in favor of abstract implication (Stylianides & Stylianides, 2009). Thus, enculturationist teaching

requires a long-term pedagogical intention undertaken by a teacher who is broadly knowledgeable about, not only the target disposition, but also the developmental precursors that may lead to it, as she or he works with whatever dispositional resources happen to be manifest in the classroom microculture at the current time.

Unlike enculturation pedagogy in which the teacher's influence may be surreptitious, acculturation pedagogy builds on students' self-identification with the reference culture. The primary pedagogical activity in support of acculturation is modeling the mature dispositional characteristics of the culture. Assuming students are identified with the reference culture and seek to acculturate themselves to it, this instruction provides them an opportunity to appropriate these cultural resources and incorporate them into their evolving repertoire of participatory practices. The prerequisite for the acculturationist teacher is that she or he *signify* as a member of the reference culture.

Enculturation and acculturation pedagogies have not previously been distinguished from one another in the literature. For instance, although Yackel and Cobb (1996) present a clear theorization for enculturationist pedagogical practices, they also underscore "the critical and central role of the teacher as a representative of the mathematical community" (p. 475)—a hallmark of acculturationist pedagogy. As a result issues of cultural cooption have not been well understood by educators.

Ethical Dimensions:

One contribution of the enculturation/acculturation pedagogical frame is to highlight as cultural work, all pedagogical activities oriented to inculcating dispositions. Most often cognitive dispositions like critical thinking and logicity are taken to be capacities of a cognitive system, rather than forms of engagement indexed to a particular culture (Burbules & Berk, 1999; Scribner & Cole, 1977). The crossdisciplinary framing of these pedagogies insists that cultural agendas be made explicit, thereby exposing them to critique and possible reconsideration.

In addition to exposing mainstream dispositional agendas to scrutiny, the framework of enculturation/acculturation applies also to pedagogies aimed at societal transformation (e.g., democratic education, liberatory pedagogy, values education, critical literacy, progressive education, character education, multicultural pedagogy), for these pedagogies, too, function by inculcating dispositions.

Two basic strategies are evident across the broad range of these pedagogies. Utopian pedagogies (my term) like democratic education and some versions of multicultural pedagogy seek to create within the classroom microculture a microcosm of a more ideal society. Students enculturated into the norms of this classroom society then carry their dispositions outward to political and social engagement in the broader society. Dewey (1900) explicitly adopted such a utopian strategy:

When the school introduces and trains each child of society into membership with such a little community, saturating him with the spirit of service, and providing him with the

instruments of effective self-direction, we shall have the deepest and best guarantee of a larger society which is worthy, lovely, and harmonious (p. 44)

In contrast with utopian pedagogies that seek to transform society from within, liberatory and critical pedagogies seek to disrupt social arrangements by having students come to “formulate and agree upon a common understanding about ‘structures of oppression’ and ‘relations of domination’” (Burbules & Berk, 1999, p. 53). The pedagogical method, here, is acculturationist, the goal being to enlist students as “‘transformative intellectuals’ (Giroux, 1988), ‘cultural workers’ (Freire, 1998) capable of identifying and redressing the injustices, inequalities, and myths of an often oppressive world” (Gruenewald, 2003, p. 4). Thus students are offered an identity structure as social change agents, with the teacher serving as an authentic representative of a culture of resistance.

What cultural agendas ought to be incorporated into schooling, and who ought to decide? These are broadly open-ended questions that are beyond the scope of this paper. What I want to do here is to posit clear ethical principles with respect to the teaching methods, themselves:

In the context of schooling, enculturational teaching always is morally acceptable. Except in the special case in which students are culturally identified with the reference culture, acculturational teaching always is morally questionable.

Before defending these proposals, it is worth noting that in some cases a pure enculturational pedagogy is impossible. For instance, in the case of mathematics education, students generally are unaware of mathematics as a distinct cultural location, nor are they aware of its characteristic dispositional markers. Thus, as demonstrated in Yackel and Cobb (1996), enculturationist pedagogies can be implemented seamlessly (i.e., covertly) in mathematics classes. In contrast, notions of scientific method and scientific culture are so salient in the broader culture, that students are likely to interpret science instruction as culturally loaded, even when the teacher takes pains to grow scientific practices indigenously within the classroom microculture of the classroom. As Aikenhead and Jegede (1999) noted,

when the culture of science is generally at odds with a student’s life-world, science instruction will tend to disrupt the student’s worldview by trying to force that student to abandon or marginalize his or her life-world concepts and reconstruct in their place new (scientific) ways of conceptualizing. This process is *assimilation*. Assimilation can alienate students from their indigenous life-world culture, thereby causing various social disruptions (Baker & Taylor, 1995; Maddock, 1981); or alternatively, attempts at assimilation can alienate students from science. (p. 274)

Nevertheless, the emphasis on enculturation versus acculturation can make a difference. Acculturationist pedagogy tends to make explicit the cultural performances that are intended of the student, often sanctioning her or him for non-performance; enculturationist teaching is non-coercive, even in cases like science instruction in which a cultural agenda is evident.

This is the crux of the argument. In a pluralistic society, cultures always are in transition under the influence of contact with other cultures. Society is teaming with cultural influences that individuals are exposed to in the course of normal social intercourse. In the process, identity structures develop and morph, often unconsciously. Yet, even at the subconscious level, there may well be controls at play that resist or reject cultural migration—a kind of cultural self-protection—as Erikson (1959) put it, “an unconscious striving for a continuity of personal character.” It is only in the case of overtly coercive pedagogy of cultural adoption that the student is vulnerable to cultural trauma.

Scientific and Practical Importance:

Typically, the cultural space of the classroom is relegated to management of behavior usually presumed to be culturally neutral (Bowers & Flinders, 1991). Likewise, most agendas for cognitive dispositions reflect cultural agendas that are unacknowledged and underscrutinized. The enculturation/acculturation distinction helps to highlight the central importance for teachers of explicit involvement in the cultural space of their classroom, while highlighting attendant ethical questions that need to be debated and resolved.

References:

- AERA (2005). AERA Annual meeting call for proposals. Retrieved from the web, http://69.8.231.237/uploadedFiles/Journals_and_Publications/Journals/Educational_Researcher/Volume_33_No_4/ERv33n4_05AnnMtgCall.pdf
- Aikenhead, G. S. (1997). Teachers, Teaching Strategies, and Culture. In *Globalization of Science Education: International Conference on Science Education* (pp. 133-136). Seoul, Korea: Korean Educational Development Institute.
<http://www.usask.ca/education/people/aikenhead/seoulteach.htm>
- Aikenhead, G. S., & Jegede, O. J. (1999). Cross-cultural science education: A cognitive explanation of a cultural phenomenon. *Journal for Research in Science Teaching*, 36(3), 269-287.
- Atweh, B., Forgasz, H., & Nebres, B. (2001). *Sociocultural research on mathematics education*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Barab, S. A., Cherkes-Julkowski, M., Swenson, R., Garrett, S., Shaw, R. E., & Young, M. (1999). Principles of self-organization: Ecologizing the learner-facilitator system. *The Journal of The Learning Sciences*, 8(3&4), 349-390.
- Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, models, and some new findings* (pp. 9-25). Boulder, CO: Westview.
- Bowers, C. A., & Flinders, D. J. (1991). *Culturally responsive teaching and supervision: a handbook for staff development*. New York: Teachers College Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.) (2000). *How people learn: Brain, mind, experience, and school* (Expanded Ed.). Washington, DC: Committee on Developments in the Science of Learning, National Research Council.

- Bransford, J. D., & Donovan, M. S. (2005). Scientific inquiry and how people learn. In M. S. Donovan & J. D. Bransford (Eds.), *How students learn: History, mathematics, and science in the classroom* (pp. 397-419). Washington DC: National Academies Press.
- Bransford, J. D., Stevens, R., Schwartz, D. L., Meltzoff, P. K., Pea, R. D., Roschelle, J., Vye, N., Kuhl, P., Bell, P., Barron, B., Reeves, B., & Sabelli, N. (2006). Learning theories and education: Toward a decade of synergy. In P. A. Alexander & P. H. Winne (Eds.) *Handbook of educational psychology, (2nd Ed)* (pp. 209-244). Mahwah, NJ: Lawrence Erlbaum Associates.
- Brown, B. A. (2004). Discursive identity: Assimilation into the culture of science and its implications for minority students. *Journal of Research in Science Teaching, 41*(8), 810-834.
- Burbules, N., & Berk, R. (1999). Critical thinking and critical pedagogy: Relations, differences, and limits. In T. Popkewitz & L. Fendler (Eds.), *Critical theories in education*. New York: Routledge.
- Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton & Co.
- Cochran-Smith, M. (2004). Defining the outcomes of teacher education: What's social justice got to do with it? *Asia-Pacific Journal of Teacher Education, 32*(3), 193 - 212.
- Collins, H. M. (1983). The sociology of scientific knowledge: Studies of contemporary science. *Annual Review of Sociology, 9*, 265-285.
- D'Amato, J. (1992). Resistance and compliance in minority classrooms. In E. Jacob & C. Jordan (Eds.), *Minority education: Anthropological perspectives* (pp. 181-207).
- Delpit, Lisa. (2006). *Other people's children: Cultural conflict in the classroom*. NY: New Press.
- Dewey, J. (1900). *School and society*. Chicago: University of Chicago Press.
- Donovan, M. S., & Bransford, J. D. (Eds.) (2005). *How students learn: History, mathematics, and science in the classroom*. Washington DC: National Academies Press.
- Dupuy, J-P. (2000). *The mechanization of the mind: On the origins of cognitive science*. Translated by M. B. DeBevoise. Princeton, NJ: New French Thought.
- Erikson, E. (1959). The problem of ego identity. *Psychological Issues, 1*(1), 101-164.
- Fletcher, G. (1995). *The scientific credibility of folk psychology*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*. Cambridge University Press.
- Freire, P. (2006). *Pedagogy of the oppressed*, (M. B. Ramos, Trans.). New York, NY: Continuum. (Original work published 1970)
- Giroux, H. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning*. South Hadley, MA: Bergin Garvey.
- Greeno, J. G., Collins, A. M., & Resnick, L. B. (1996). Cognition and learning. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 15-46). New York: Macmillan.
- Gruenewald, D. A. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher, 32*(4), 3-12.
- Gutstein, E. (2003). Teaching and learning mathematics for social justice in an urban Latino school. *Journal for Research in Mathematics Education, 34*(1), 37-73.
- Hall, E. T. (1966) *The hidden dimension*. New York: Doubleday.

- Hall, V. C. (2003). Educational psychology from 1820 to 1920. In B. J. Zimmerman & D. Schunk (Eds.), *Educational psychology: A century of contributions* (pp. 3-40). Mahwah, NJ: Lawrence Erlbaum Associates.
- Herskovits, M. J. (1955). *Cultural anthropology: An abridged revision of man and his works*. New York: Knopf.
- Hilgard, E. R. (1996). History of educational psychology. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 990-1004). New York: Macmillan.
- Kincheloe, J., & Steinberg, S. (2007). *Cutting class: Socio-economic status and education*. Boulder, CO: Rowman and Littlefield.
- Kirschner, S. R., & Martin, J. (2010). The sociocultural turn in psychology: An introduction and an invitation. In S. R. Kirschner & J. Martin (Eds.), *The sociocultural turn in psychology: The contextual emergence of mind and self* (pp. 1-27). New York: Columbia University Press.
- Kirshner, D. (2002). Untangling teachers' diverse aspirations for student learning: A crossdisciplinary strategy for relating psychological theory to pedagogical practice. *Journal for Research in Mathematics Education*, 33(1), 46-58.
- Kirshner, D. (2004). Enculturation: The neglected learning metaphor in mathematics education. In D. McDougall & J. A. Ross (Eds.), *Proceedings of the twenty-sixth annual meeting of the International Group for the Psychology of Mathematics Education, North American Chapter* (vol. 2, pp. 765-772), Toronto: OISE/UT.
- Kirshner, D. (2008). *The Discursive Construction of Good Teaching*. Paper presented as the 15th International Conference on Learning, Chicago, June 3-6.
- Kirshner, D. (2010). *The Incoherence of contemporary pedagogical reform: metacognition through crossdisciplinary lenses*. Paper presented at AERA Annual Meeting, Denver, CO, April 30, 2010. ED510954, available at the ERIC Web site (<http://www.eric.ed.gov>)
- Kirshner, D., & Meng, L. (In press). Enculturation and acculturation. *Encyclopedia of the sciences of learning*. Berlin: Springer Publishing.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (enlarged edition). London: University of Chicago Press.
- Lagemann, E. C. (2000). *An elusive science: The troubling history of education research*. Chicago: University of Chicago.
- Li, S. (2001). How close is too close?: A comparison of proxemic reactions of Singaporean Chinese to male intruders of four ethnicities. *Perceptual and Motor Skills*, 93, 124-126.
- McCarthy, C. (1993). After the canon: Knowledge and ideological representation in the multicultural discourse on curriculum reform. In C. McCarthy & W. Crichlow (Eds.), *Race, identity and representation in education* (pp. 289-305). New York: Routledge.
- Moses, R. P., & Cobb, C. E. Jr. (2001). *Radical equations: Math literacy and civil rights*. Boston: Beacon Press.
- National Council for Accreditation of Teacher Education. (2002). *Professional standards for the accreditation of schools, colleges, and departments of education*. Washington DC: Author.
- Omar (2010, January 16). Is your (institutional) theory "Parsonian"? A technical criterion. *Orgtheory.net*.
<http://orgtheory.wordpress.com/2010/01/16/is-your-institutional-theory-parsonian-a-technical-criterion/#comment-88128>

- Parsons, T. (1951). *The social system*. London: Routledge & Kegan Paul.
- Perkins, D., & Ritchhart, R. (2004). When is good thinking? In D. Y. Dai & R. J. Sternberg (Eds.), *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development* (pp. 175-194). Mahwah, NJ: Erlbaum.
- Pinch, T. (2007). The sociology of science and technology. In C. D. Bryant & D. L. Peck (Eds.), *21st century sociology: A reference handbook* (vol. 2) (pp. 266-276). Thousand Oaks, CA: Sage Publications.
- Powell, J. W. (1880). *Introduction to the study of Indian languages* (2nd ed.). Washington, D.C.: U.S. Government Printing Office.
- Pressley, M., & Roehrig, A. D. (2003). Educational psychology in the modern era: 1960 to the present. In B. J. Zimmerman & D. Schunk (Eds.), *Educational psychology: A century of contributions* (pp. 333-366). Mahwah, NJ: Lawrence Erlbaum Associates.
- Remland, M.S., Jones, T. S., & Brinkman, H. (1991). Proxemic and haptic behavior in three European countries. *Journal of Nonverbal Behavior*, *15*(4), 215-232.
- Rubin, B. C. (2007). Learner identity amid figured worlds: Constructing (in)competence at an urban high school. *The Urban Review*, *39*, 217-249.
- Sampson, E. E. (1993). Identity politics: Challenges to psychology's understanding. *American Psychologist*, *48*, 1219-1230.
- Sawyer, R. K. (2006). Introduction: The new science of learning. In R. K. Sawyer (Ed.) *The Cambridge handbook of the learning sciences* (pp. 1-16). New York: Cambridge University Press.
- Scribner, S., & Cole, M. (1977). Cross-cultural studies of memory and cognition. In R. V. Kvavil, Jr., & J. W. Hagen (Eds.), *Perspectives on the development of memory and cognition* (pp. 239-272). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Stylianides, G. J., & Stylianides, A. J. (2009). Facilitating the transition from empirical arguments to proof. *Journal for Research in Mathematics Education*, *40*(3), 314-352.
- Thorndike, E. L., & Woodworth, R. L. (1901). The influence of improvement in one mental function upon the efficiency of other functions. *Psychological Review*, *8*, 247-261.
- Vågan, A. (2011). Towards a sociocultural perspective on identity formation in education. *Mind, Culture, and Activity*, *18*, 43-57.
- Vygotsky, L. S. (1981). The genesis of higher mental functions. In J. V. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 144-188). Armonk, NY: M. E. Sharpe.
- Whitley, R. (1972). Black boxism and the sociology of science. *Sociological Review Monograph* *18*, 61-92.
- Yackel, E., & Cobb, P. (1996). Sociomathematical norms, argumentation, and autonomy in mathematics. *Journal for Research in Mathematics Education*, *27*(4), 458-477.