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Paradigm proliferation as a good thing to think with: teaching research in education as a wild profusion

Patti Lather*
Ohio State University

This paper situates paradigm talk with its insistence on multiplicities and proliferations in tension with a resurgent positivism and governmental imposition of experimental design as the gold standard in research methods. Using the concept of 'coloring epistemologies' as an index of such tensions, the essay argues for proliferation as an ontological and historical claim. What all of this might mean in the teaching of research in education is dealt with in a delineation of five aporias that are fruitful in helping students work against technical thought and method: aporias of objectivity, complicity, difference, interpretation, and legitimization. The essay concludes with a 'disjunctive affirmation' of multiple ways of going about educational research in terms of finding our way into a less comfortable social science full of stuck places and difficult philosophical issues of truth, interpretation and responsibility.

Introduction

> We should be careful to note that the colonial world never really conformed to the simple two-part division of this dialectical structure…. Reality always presents proliferating multiplicities…. *Reality is not dialectical, colonialism is*. (Hardt & Negri, 2000, p. 128, emphasis in the original)

In the contemporary scene of a resurgent positivism and governmental incursion into the space of research methods (Lather, 2004a, 2004b), this essay situates paradigm talk with its insistence on multiplicities and proliferations in tension with a return to the kind of imperial science that some 40 years of paradigm contestation had, almost, displaced. Against the 'methodological fundamentalists' who are having their moment where critical researchers are being written off as 'ideologues' (Howe, 2004), my insistence in this essay is on paradigm talk as a 'good thing to think with'

* Cultural Studies in Education, School of Educational Policy and Leadership, Ohio State University, 121 Ramseyer, 29 W. Woodruff, Columbus, OH 43210, USA. Email: lather.1@osu.edu

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in terms of demands for practices of knowing with more to answer to in terms of the complexities of language and the world. I begin with some efforts toward paradigm mapping.[1]

Table 1 is a revised version of a paradigm chart that I have long used in my teaching of qualitative research to help students begin to map the field. It is co-constructed by Bettie St Pierre and me. Tables 2 and 3 are examples of student charts, part of their midterm assignments. Table 2 works well to illustrate the uses of humor in such things in its use of 'if this research paradigm were a personality disorder … or a sport … or a drink.' Table 3, subtitled 'A diagram of *some* of what's out there,' is particularly noteworthy for its delineation of the 'inside' and 'outside' of the borders of hegemonic/European thought.

The utility and exactitude of such mappings is precisely the key. Linear, structural models reduce and 'tame the wild profusion of existing things' (Foucault, 1970, p. xv). Dualistic categories are represented as pure breaks rather than as unstable oppositions that shift and collapse both within and between categories. The slides of inside and outside that so characterize the contemporary hybridity of positionalities and consequent knowledge forms are tidied over. 'Working against the solidification of the dangerous structures we create in what can no longer be imagined as the innocent pursuit of knowledge' (Foucault, quoted in St Pierre, 2000), I use such mappings to trouble tidy binaries, whether of qualitative/quantitative, positivist/post-positivist or, more recently, 'scientific research in education' (SRE) and its binary of 'rigorous' and 'underdeveloped' educational research (National Research Council, 2002).

Older stories of science spoke of 'paradigm shifts' and 'normal' and 'revolutionary' periods whereas newer stories argue for proliferation versus successor regimes (Harding, 1991; Hollinger, 1994). Hence chart 1 argues against a linear sense of development toward 'one best way' and 'consensus' approaches. It enacts, instead, a paradigm mapping that deliberately holds together necessary incompatibilities in the hope that such a chart can help us diagram the variety that characterizes contemporary approaches to educational research. In short, while Kuhn (1962) recognized how differences across research approaches were 'incommensurable,' it is the very linearity of Kuhn's framework that is being contested in more recent mappings. Here the attempt is to capture the play of both the dominant and emergent knowledges vying for legitimacy in order to open up a history of what contains thought and how thought is both shaped by and excessive of that containment.

Many worry that such a proliferation of research approaches vying for legitimacy will lead to communicative breakdowns around epistemic incommensurabilities (Donmoyer, 2001). While no fan of a qualitative/quantitative divide, Donmoyer's worries do not take into account the need to prepare education doctoral students for 'epistemological diversity' outside of consensus models (Pallas, 2001). In a much larger field than that of educational research, the great monolithic oppositions that have historically structured our thought are increasingly displaced by greater differentiation out of shifting forces and the fixing and unfixings of power itself (Hardt & Negri, 2004).

Table 1. Revised paradigm chart

Predict	Understand	Emancipate	Brk	Deconstruct	Next?
*Positivist	*Interpretive	*Critical		Poststructural	Neo-positivism
Mixed methods	Naturalistic	Neo-Marxist		Postmodern	
	Constructivist	< Feminist >			
	Phenomenological	Critical race theory		Queer theory	
		Praxis-oriented		< Discourse analysis	
	Ethnographic	Freirian participatory < action research			
	Symbolic/ interaction			Postcolonial	Post-theory
				Post-Fordism	Neo-pragmatism
	Interpretive mixed methods			Post-humanist	Citizen inquiry
				Post-critical	Participatory/ dialogic Policy analysis
		Gay and lesbian theory			
				Postparadigmatic diaspora (John Caputo)	
		Critical ethnography		Post everything (Fred Erickson)	Post-post

(Patti Lather & Bettie St Pierre, 2005)

Notes: *Indicates the term most commonly used; < > indicates cross-paradigm movement. Brk (Break) Indicates a shift from the modernist, structural, humanist theories/discourses on the left to the postmodernist, poststructural, posthumanist theories/discourses on the right. In the post theories, all concepts (language, discourse, knowledge, truth, reason, power, freedom, the subject, etc., are deconstructed). Though all these paradigms operate simultaneously today, there is a historical sense to their articulation. August Comte (1778–1857) proposed positivism in the nineteenth century; social constructivism is often dated from Peter Berger and Thomas Luckmann's (1966) book, the *Social construction of reality*. The emancipatory paradigms grew from the Frankfurt School and the social movements of the 1960's and 1970's; and the post paradigms, from the critiques following the Second World War, include those of Michel Foucault (1926–84), Jacques Derrida (1930–2004), and Gilles Deleuze (1925–95). Paradigm shifts occur as reaction formations to the perceived inadequate explanatory power of existing paradigms. Therefore, someone who works in emancipatory paradigms, for example, is often aware of the theoretical assumptions as well as the critiques of positivism and interpretivism. Note also that some theories that start out in one paradigm change considerably when they are taken up in another; e.g. poststructural feminism is considerably different from liberal, emancipatory feminism. Conventional science is positivist but when science's assumptions are rethought in interpretive or post paradigms, it is not the same; *i.e. science is not the same in all paradigms in terms of ontology, epistemology and methodology*.

Source: Based on: Lather, Patti (1991) *Getting smart: Feminist research and pedagogy with/in the postmodern* (New York, Routledge). [see p. 7 of this book for an earlier version of this chart.] Derived from the following: Habermas, Jurgen (1971) *Knowledge and human interests* (Jeremy J. Shapiro, Trans.) (Boston, Beacon Press). (Original work published 1968)

Table 2.

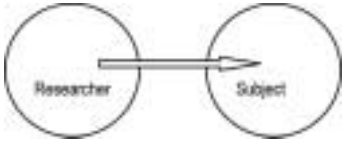
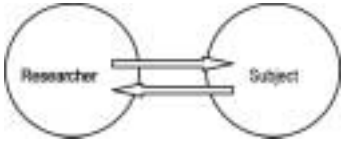
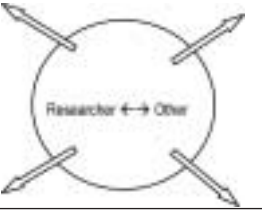
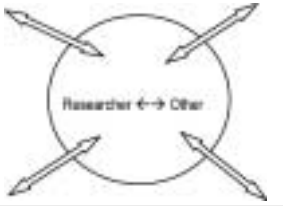
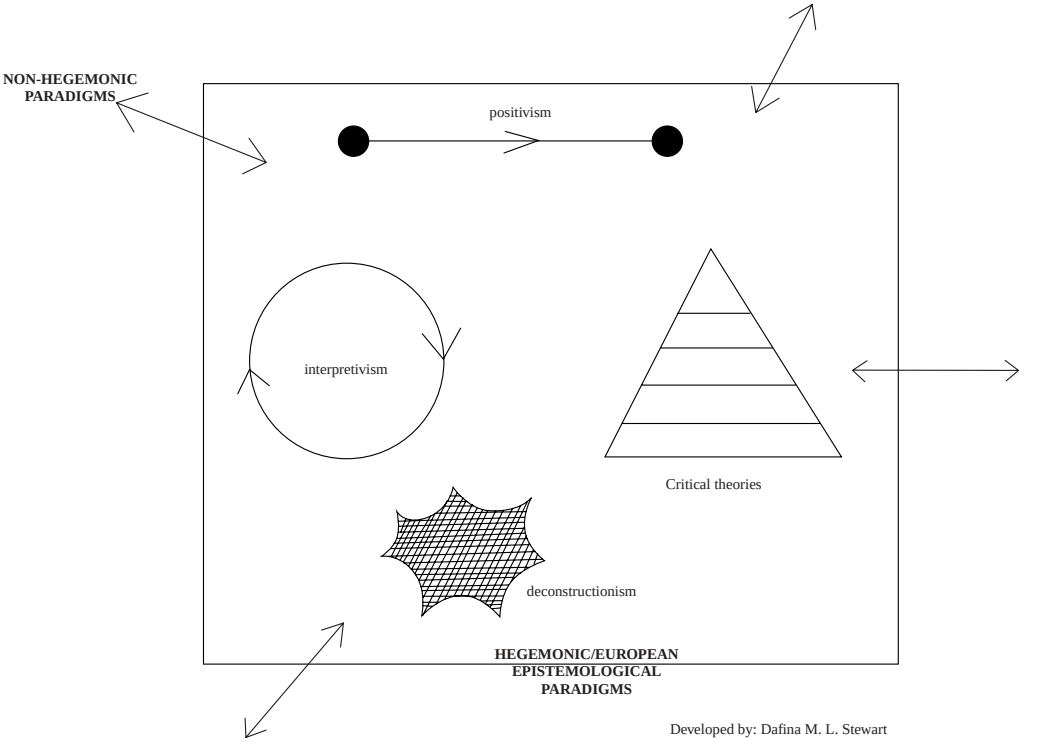
POSITIVIST	*Interpretivist*	**CRITICAL THEORY**	Deconstructivist
			
Reality is objective and "found"	Reality is subjective and constructed	Reality is subjective and constructed on the basis of issues of power	Reality is ultimately unknowable; attempts to understand it subvert themselves
Truth is one	Truth is many	Truth is many, and constitutes a system of socio-political power	"Truths" are socially constructed systems of signs which contain the seeds of their own contradiction
Discourse is structured and transparent, reflecting reality	Discourse is dialogic and creates reality	Discourse is embedded in (and controlled by) rhetorical and political purpose	Discourse is by nature inseparable from its subject, and is radically contingent and vulnerable
What is true?	What is heuristic?	What is just?	Is there a truth?
What can we know?	What can we understand?	What can we do?	What constitutes truth?
Knowing the world	Understanding the world	Changing the world	Critiquing the world
Communication as transmission	Communication as transaction	Communication as decision-making	Communication as challenging the nature of communication
If this research paradigm were a color, it would be:			
blue (cool, "scientific," objective)	**green** (natural, symbolic of organic growth)	**red** (dynamic, action-oriented)	**black** (absence or denial of color)
If this research paradigm were a public event, it would be:			
a marching band or **classical ballet** (precise, rule-dominated)	**community picnic** (cooperative, interactive, humanistic)	**a March of Dimes telethon** (active, purposeful, concerned with marginal groups)	**a circus, amusement park, or carnival** (multiplicity of perspectives and stimuli; no single reference point

Table 2. *Continued.*

POSITIVIST	*Interpretivist*	**CRITICAL THEORY**	Deconstructivist
If this research paradigm were a game, it would be:			
Tetris (exacting, quantitatively oriented, uses computer)	**Clue** (exchanges with other players inform decisions)	**Monopoly** (a world constituted by economic struggles)	**Candyland** (unconcerned with reality; played either by children or the extremely sophisticated)
If this research paradigm were a sport, it would be:			
golf (boring, individual, fastidious, exacting)	**tennis** (interactive, interdependent, labor intensive)	**midnight basketball** (collaborative, intended to change society; oppressed participate in self-empowerment)	**professional wrestling** (is it real? non-reality disguised as reality; simultaneous acceptance and denial of what is real)
If this research paradigm were a celebrated figure, it would be:			
Anita Bryant **Napoleon** (sure of their position; calculating)	**Florence Nightingale** **Dag Hammersjold** (receptivity to others; ability to entertain multiple viewpoints)	**Susan B. Anthony** **Karl Marx** (activists; concerned with oppressed groups)	**kd lang** **Woody Allen** (self-contradictory; quirky; they carve out their own space)
The researchers in this paradigm would drink:			
Scotch on the rocks (conventional, "hard" liquor for "hard science," hegemonic)	**Californian white wine** (natural, convivial, social, interactive)	**Vodka** (the revolutionary's drink; fiery, subversive)	**Zima** (defies categorization; neither wine, nor beer, nor hard liquor; trendy)

Table 3. Research paradigms: a diagram of *some* of what's out there



In such a place, paradigm mapping can help us recognize both our longing for and a wariness of an ontological and epistemological home. The task is how to diagram the becoming of history against the limits of our conceptual frameworks that are so much about what we have already ceased to be. Such charts become abstract machines, provisional and schematic, designed to move us to some place where oppositions dissolve through the very thinking they have facilitated.

Coloring epistemologies as indexical of fruitful tensions

The concept of 'coloring epistemologies' (Scheurich & Young, 1997) is a rich area in which to probe such issues, particularly the play of multiple emergent knowledges vying for legitimacy. Arguing for the weight of racism in the articulation of research perspectives, Scheurich and Young call for white researchers to both familiarize themselves with the wealth of writing on foundations of research from scholars of color and foreground racism in understanding how dominant discourses are shaped.[2] As a counter-discourse made available in the pages of the *Educational Researcher*, Tyson (1998) responds by asking how such a concept comes into being: 'Why now … when a white male [and white female] calls for it?' Her interest is in how 'an epistemology of emancipation' grows out of surviving under conditions of oppression to inform methodology.

As a discursive formation, the concept of coloring epistemologies incites questions of how it came to be and what its effects are within power relations and modes of domination. This opens up a history of what contains thought and how thought is both shaped by and excessive to that containment. Foucault argues that discursive formations are constantly becoming epistemologized, 'shot through with the positivity of knowledge' (1972, p. 194). Unpacking this process involves a look at the specificity, function and network of dependencies that attends to dispersion and scattering, a decentering operation that produces differences.

How to position, then, an example of proliferating epistemologies such as the 1999 dissertation research of Daa'iyah Saleem? In her case study of a Muslim teacher, Saleem's interest is in what she terms a 'god-centric epistemology.' Positioning herself as Muslim before she is black and woman, she draws on her religious beliefs to warrant her research design and analytic practices. Part of her research plan, for example, was to live and co-write with her research participant out of Muslim principles. While Donmoyer (2001) might regard Saleem as a case study of his fears of 'infinite regress,' I see her work as about the very tensions of the (non)containment of the discontinuous other, producing knowledge within and against academic intelligibilities.

As Britzman (1995) reminds us, the limit of intelligibility is the boundary 'where thought stops what it cannot bear to know, what it must shut out to think as it does' (p. 156). The intelligible is not a necessary limit, Foucault says, 'We must think that what exists is far from filling all possible spaces' (1997, p. 40). Judith Butler argues that the injunction to remain inside intelligibility produces a 'constitutive outside': the unspeakable, the unviable, the nonnarrativizable. This is no clash of discourses but a continual subversion of the coherence of the discourse that attempts but must fail to exclude its outside while the outside cannot entirely be other to the inside (Butler, 1993, p. 188).

Hence, Saleem enacts a dual agenda that creates a radically fractured text that is within both a critical deconstructive suspicion of hegemonic practices and a simultaneous reinstallment of the referent in the service of resistant struggles. This is about living in hybrid space, 'speaking with' in terms of research participants and 'within/against' in terms of disciplinary apparatuses. As such, Saleem's work testifies to the disavowals and disidentifications of dual agendas across researchers differently positioned under conditions of (post)modernism/colonialism. Negotiating the 'post' in strategic ways, she presses on the boundaries of academic intelligibility by refusing to displace the essential features of minority discourse while undercutting stable identities and research practices. In doing so, Saleem seems alert to DuCille's argument that postcolonialism can as likely serve as a 'containment strategy' as a resistance narrative to the extent that it is situated as a universal master narrative while localizing African-American discourses (DuCille, 1996, p. 127).

In her book on postcolonial reason, Spivak argues that our very sense of critique is determined by Kant, Hegel and Marx (1999, p. 6). It is, she argues, a vain gesture to dismiss them as 'the West.' Wanting to escape the 'prisonhouse of academic identity politics' (p. 29), she advocates the generation of a 'shaky middle by way of an

irreducible "mistake" that is other to the other of correct.' Rather than 'a stage in the journey toward adequation' (p. 41), such a strategy emphasizes performance over formation, a sort of necessary error that is 'the rhetorical motor of a shift from the transcendental to the social' (p. 55). Hence, rather than promises of 'cure' (p. 110), coloring epistemologies might be better situated as about persistent effort and deferred fulfillment.

Such work as Saleem's, then, becomes a way of working half in and half out of what is at hand, negotiating with preexisting structures of violence: necessary error over successor regime, a rhetorical motor toward Britzman's wish that 'educational research should become increasingly unintelligible to itself' in a way that is outside epistemological capture.[3] Rather than the tired binaries of a monolithic West and some innocent indigenous culture, the pressing questions are what it means to claim the status of knowledge producer after so long being positioned as the knowable object of powerful others, what academic work will look like as it begins to juxtapose the discursive resources of different social formations, and how the reach of counter-knowledges gets extended and by whom.

Proliferation happens

Not too long ago, I wrote a paper about Rigoberta Menchu and issues of historical truth, interpretation and translation (Lather, 2000). In that project, I read about the proliferation of postnational movements in Latin America. Doris Sommer (1996) sees these as changes in the cultural sphere given the demise of the Cold War. She posits that national revolution is no longer the way to understand social justice issues, that identity politics is filling up that space in a way that contests the homogenizing apparatus imposed by an increasing socioeconomic globalization. According to Sommer, the contemporary political situation consists of several simultaneous points of activity and valid roles, with no one center.

Laclau and Mouffe (1985), in their work on hegemony and socialist strategy, underscore the global political dimensions of this argument that the logic of equivalence is a logic of the simplification of political space, while the logic of difference is a logic of its expansion and increasing complexity. Displacement, they argue, creates a surplus of meaning via the multiplication of democratic struggles, none of which is unitary. One example of this is Antonio Negri's theorizing of the autonomy movement in Italy as a political analytic based not on a unified analysis but on a diversity of multiple and irreducible analyses (May, 1994; Hardt & Negri, 2000).

In thinking about paradigm proliferation in the context of the constellation of discourses that typify educational research, Donmoyer (2001) worries about indigenous epistemologies based on cultural difference, conflation of epistemology and lived experience, and communicative breakdowns around epistemic incommensurabilities. My worries are elsewhere as I see proliferation as an outcome of the repression of Hegelian dialectics, which subsumes difference into the same. Here proliferation is situated as part of the break-up of cultural monoliths. A changing

terrain of knowledge and power characterizes the thinking of an uncontainable excess of post-Hegelian frameworks. Whether Freudian theories of radical splitting, Derridean theories of the supplement, or Native American theories of the trickster, proliferation, like deconstruction, happens.[4] This is a historical and ontological claim, not an epistemological one. Hence the sort of uncontainable proliferation that I am suggesting as a characteristic of contemporary research is exactly and more than what bothers Donmoyer. It is exactly so in its multiplicities without end. It is more in its tensions between postepistemic refusals of presence and foundations and subaltern calls for a restoration of self and voice.

It is here that my worries kick in. Radical proliferation undermines the basis of an identity politics locked into polar opposition. But one example is Deleuze's call for 'a thousand tiny sexes' rather than the binary categories of homosexual and heterosexual (Grosz, 1994). Such nomadic rather than sedimentary conjunctions produce fluid subjects, ambivalent and polyvalent, open to change, continually being made, unmade and remade. Judith Butler famously theorizes identity as an effect of a repetition that is not an enforcement of the norms of the same, but necessarily variation, divergence, deviation, even subversion. Repetition, hence, proliferates, displacing the norms that enable the repetition. In excess of the intending subject, repetition subverts norms through discontinuous interruptions (Butler, 1993, p. 120). In Butler's Nietzschean frame, difference and multiplicity are the primary ontological categories rather than identity that is a betrayal which is in turn betrayed by a repetition which is not about equivalence so much as variation. Nietzsche's world is one of flux over stasis where identity is a mask, a fiction, enabling or not. 'I am that which must overcome itself again and again,' he wrote in *Thus spoke Zarathustra* (1961, p. 138). Rather than essential and authentic selves, we become both protean and plastic, constantly on our way to becoming due to the contingencies of history and our transformations, both conscious and unconscious, across conditions of repetitions that proliferate multiple differences.

Proliferation, of course, is its own containment. Such containment works in doubled ways. Homi Bhabha, for example, theorizes that hybridity marks a proliferation of differences that escape surveillance. Faced with hybridity, 'the *presence* of power is revealed as something other than what its rules of recognition assert' (quoted in Niranjana 1992, p. 45). Estranging the basis of authority of the dominant, the proliferation of differences so evident on the contemporary scene is about difference that can be neither expressed nor erased but only contained as add-ons to existent models which accumulate to collapse the models from inside. And we are left, perhaps, with Lyotard's goal in *Libidinal economy* (1974): to subvert representation by exhausting its resources, by bringing it to the limit via a multiplication that drives the system to a point of implosion. Translated to the scene of research, Lyotard's strategy for bringing capitalism's own principle beyond its limit conjures visions of a thousand tiny paradigms, little war machines, to borrow a Deleuzean term, working discontinuous interruptions that aggregate in excess of intending subjects and tidy categories or purposes toward a transvaluation of disciplinary formations.

Doubled practices: within/against as a way to keep moving

> My view is that radical practice should attend to this double session of representations rather than reintroduce the individual subject through totalizing concepts of power and desire. (Spivak, 1999, p. 264)

I have read too much Gayatri Spivak to buy into indigenous epistemologies untouched by Western philosophy, concrete experience as the final arbiter, and an untroubled celebration of identity politics.[5] But I do recognize what John Beverley terms 'the fundamental inadequacy' of academic knowledge given how it is 'structured by the absence, difficulty or impossibility of representation of the subaltern' (1996, p. 354). Academic knowledge becomes 'enemy country' through which a new kind of politics must pass on its way to a more radically democratic and less hierarchical social order.

One example of such an effort is *De-colonizing methodology: research and indigenous peoples* (1999), where Linda Tuhiwai Smith poses a counter-story to Western ideas about the benefits of the pursuit of knowledge. Looking through the eyes of the colonized, cautionary tales are told from an indigenous Maori perspective, tales designed not just to voice the voiceless but to prevent the dying—of people, of culture, of eco-systems. Informed by critical and feminist critiques of positivism, Tuhiwai Smith urges 'researching back' and disrupting the rules of the research game toward practices that are 'more respectful, ethical, sympathetic and useful.' Using Kaupapa Maori, a 'fledgling approach' toward culturally appropriate research protocols and methodologies, the book is designed primarily to develop indigenous peoples as researchers. In short, Tuhiwai Smith begins to articulate research practices that arise out of the specificities of epistemology and methodology rooted in survival struggles, a kind of research that is something other than a 'dirty word' to those on the suffering side of history.

Tuhiwai Smith complicates the question of indigenous ways of knowing by raising questions about 'the "authentic, essentialist, deeply spiritual" Other' (p. 72). Shifting attention away from universalizing categories of difference and toward historically located subjects, rather than identity, she argues that positionality is about historical inscription, multiplicity and specificity: situated selves, power regimes and contested meanings. Tuhiwai Smith writes of Maori research as 'a social project' which 'weaves in and out of Maori cultural beliefs and values, Western ways of knowing, Maori histories and experiences under colonialism, Western forms of education, Maori aspirations and socio-economic needs, and Western economics and global politics' (p. 191). Rather than a purely indigenous way of knowing, Tuhiwai Smith's hybrid practice situates research as a within/against movement toward a positioned cultural politics.

Such efforts provide a different kind of academic voice. While the concept of 'coloring epistemologies' may be what Spivak terms a 'disciplinary mistake' (1999, p. 249), 'perhaps we cannot do otherwise' in this time and place, 'but one can tend.'[6] As a 'positivity' in Foucauldian terms,[7] coloring epistemologies is inscribed in a field of different practices, ranging across multiple and fractured critical, feminist and deconstructive analytics combined with indigenous and race-based perspectives no

less multiple and fractured in the transvaluation of scientific discourses. Such a concept stages how the difference that positionality makes enacts the sort of aggregative capacities that Levinson (1995) privileges over conscious intentionality in theorizing her post-dialectical praxis. Such a praxis fosters difference via impossible practices of excess, affect, speed and complexity. This is a praxis quite other to one based on concepts of transformative intellectuals, ideology-critique, a voluntarist philosophy of consciousness and pretensions toward 'emancipating' or 'liberating' some others. In excess of binary or dialectical logical, this is a praxis that disrupts the horizon of an already prescribed intelligibility to ask what might be thought and done otherwise. This is the between space of what seems impossible from the vantage point of our present regimes of meaning, a between space situated as an enabling site for working through the stuck places of present practice. This is using praxis as a material force to identify and amplify what is already begun toward a practice of living on (Balibar, 1995, p. 122).

There remains, however, that 'but one can tend' to attend to. Situating 'disciplinary mistakes' not as 'some journey toward adequation' (Spivak, 1999, p. 41) but rather a stammering that is ontological in its 'inability to conceptualize what is being thought when thought tries to think its thinking' (Haver, 1997, p. 290), the concept of coloring epistemologies is both limit and resource. Out of questions of 'the sciences, their history, their strange unity, their dispersion, and their ruptures,' such proliferations are born in the interstices of dominant discourses in ways that illuminate 'the play of discursive formations' (Foucault, 1972, p. 195). Troubling the closures and sometimes pieties of identity politics, standpoint theories and experience-based knowledge is not to try to close this openness but to keep us moving in order to produce and learn from ruptures, failures, breaks, refusals.

From competing paradigms to disjunctive affirmation: teaching research in education[8]

What all of this might mean in the teaching of research in education is a topic of considerable interest these days. From the National Research Council's 2002 report, *Scientific research in education* to the Carnegie Initiative, there is an intensity of focus on doctoral preparation in educational research that is unlike anything we have seen in the past.

This is captured in a recent Institute of Education Sciences (IES) call for postdoctoral research training fellowships in the education sciences (release date 9 July 2004). The call is for 'a new generation of methodologically rigorous and educationally relevant scientific research that will provide solutions to pressing problems and challenges facing American education.' Background information argues that while a solid research base is needed, 'significant capacity issues within the education research community' stymie efforts to transform education into an evidence-based field. The dominance of qualitative methods is 'a clear sign of the mismatch between the focus of the practice community and the current research community.' Psychometrics or 'rigorous training in research methodology and statistics' is what is needed if

educational research is to 'contribute to the solution of education problems and to provide reliable information about the education practices that support learning and improve academic achievement and access to education for all students.'

In response, Eisenhart and DeHaan (2005) delineate a possible training rubric and invite 'conversations, debates, and actions that lead to a reinvigoration and broadening of doctoral programs in education research' (p. 11). For Eisenhart and DeHaan, 'a culture of science' refers to the norms of inquiry that lead to warranted claims and explanations. Socialization into these norms is the foundation of training. Epistemological differences across postpositivist (where they locate SRE), interpretivist, critical and postmodern research are granted. Understanding diverse epistemological perspectives and methodologies and the complex context of educational practice have long structured such training. The new claim is to make the norms of scientific inquiry a central component. In this, a Kuhnian 'maturation' theory of the social sciences is assumed and experimental and interpretive science are held to be two different forms of such science, although the 'principles of inquiry' and 'the general processes of inquiry' are argued to be the same.[9]

Eisenhart and DeHaan want research experience or apprenticeships built into early training. While acknowledging the difference between graduate students in education and the 'natural' sciences in terms of both already developed analytic, intellectual skills and levels of support, including full- versus part-time study (24.8% for education), funding agencies' interest in interdisciplinary research is situated as the driving force for training, especially interdisciplinary projects that straddle cognitive science and education practice. One proposed model is Northwestern where two-thirds of the faculty have degrees outside education (2005, p. 8).

Against major directions in the field, Eisenhart and DeHaan advocate a separate research-intensive PhD and a practice-oriented EdD that emphasizes 'craft' knowledge. Using the health sciences as a model via the Flexner Report (1910) that resulted in separate training for clinicians and researchers and a 2001 report in nursing education that addressed differences between PhD and Nursing Doctorate degrees, they urge a combination of core courses in neuroscience, sociology of science and linguistics, research experience, teaching experience in practice-oriented contexts, and interdisciplinary collaborations.

While I have many differences from Eisenhart and DeHaan, I share their interest in an approach to the teaching of educational research that both moves out of frameworks of competitive paradigms and situates our efforts within contemporary knowledge problematics, regardless of paradigmatic and methodological persuasions. This might be termed a more 'foundational' approach if it were not, exactly, foundations that are so much in question in the 'postmodern condition' (Lyotard, 1984). 'Problematics' is my term of choice because it calls on a cross-disciplinary sense of where our questions come from, what is thinkable and not thinkable in the name of social inquiry in particular historical conjunctions.[10]

My major difference from Eisenhart and DeHaan is evident in my title for this section which comes from Foucault's (1998) review of Deleuze's efforts to bring Freud and Marx together not in reconciliation but in 'disjunctive affirmation.'

Against the assumption of Eisenhart and DeHaan of shared scientific principles across paradigms, my move is other to what Foucault calls 'the tyranny of good will, the obligation to think "in common" with others…' and toward what he terms a 'perverting' of common sense where philosophy itself is disoriented by uncontainable difference. Rather than searching for the common elements underlying difference, Deleuze was interested in the production of distress as a strategy to think difference differently. This is quite other to dialectics with its synthesis of oppositions into the same.[11] This 'freeing of difference' is about divergence, dispersed multiplicities, the possibilities of that which is in excess of our categories of containment. If we can manage this, 'new thought is possible; thought is again possible,' Foucault (1998, p. 367) says, predicting, perhaps ironically, that this century may be known as Deleuzean (p. 343).

In short, what I am advocating is teaching educational research in such a way that students develop an ability to locate themselves in the tensions that characterize fields of knowledge. In our particular context of educational research where grand narratives and one-best-way thinking are being reasserted under the banner of SRE, my major claim is that such efforts need to be situated in a context of a historical time marked by multiplicity and competing discourses that do not map tidily onto one another, a time of unevenly legitimized and resourced incommensurabilities regarding the politics of knowing and being known. The ability to situate oneself methodologically in the face of an imposed 'new orthodoxy' (Hodkinson, 2004) is not about paradigm competition but, much more profoundly, about a move away from a narrow scientism and toward an expanded notion of scientificity more capable of sustaining the social sciences as, in Dosse's (1999) words, an 'investigative workshop … philosophy by other means' rather than a 'potentially hard science' (Lather, in press).[12]

This is a move into a less comfortable social science on the basis of Foucault's maxim that nothing is innocent and everything is dangerous (1983, p. 343). Foucault goes on to note that just because something is dangerous does not mean it cannot be useful, a point often dropped. But this 'how to be of use' concern, framed within a necessary complicity, is key in framing issues away from the binary of either qualitative or quantitative, with its fostering of 'my paradigm is bigger or better than yours' or 'real science' versus that which does not meet scientistic demarcation criteria. The move is, rather, toward a recognition that we all do our work within a crisis of authority and legitimization, proliferation and fragmentation of centers, and blurred genres.

I am against the kind of methodolatry where the tail of methodology wags the dog of inquiry. As Kvale notes, 'What and why have to be answered before how questions of design can be meaningful' (1996, p. 95). But understanding logics of inquiry and philosophies and histories of knowledge are key in getting over the search for a 'way out' via method (Britzman, 1997). I would like to think that we in educational research had our 'paradigm wars' almost two decades ago and are now moving toward a recognition that we all do our work within a disunified science and its contested, polyvocal and in-flux nature that so flummoxes typical approaches to the demarcation debates that try to contain the proliferation of countervailing practices.

But the recent federal push for randomized trials as the 'gold standard' to address the 'broken' state of educational research has reopened the demarcation debates (National Research Council, 2002). These debates regarding what is and is not science and what is and is not 'good' science require students to have some background in the 'science wars' (Ross, 1996) and the politics of science of the US accountability movement in public education, including the qualitative response to the narrowly defined sense of science-based evidence in play in federal legislation (e.g. Willinsky, 2001; Eisenhart & Towne, 2003; Lather, 2004a, 2994b).[13]

Against such efforts to contain the countervailing practices alive in educational research, such proliferation is about saying yes to the messiness, to that which interrupts and exceeds versus tidy categories. Interrupting production of the subject supposed to know about objects supposed to be knowable troubles understanding, interpretation, and explanation within frameworks of mimesis, representation and adequation. Here research, whether qualitative or quantitative, positivist or post-positivist, becomes a staging of our stammering relationship to knowing and interrupts long familiar habits of referentiality in the production of knowing. This is a very different kind of science than that being imposed by the 'new orthodoxy' and its deep imbrication in global neoliberal audit culture. It is precisely this contest over 'what is science' that is the heart of the matter.

My investment in teaching PhD courses in educational research, then, is in restructuring the space of educational research across the paradigms as a knowledge-making project that requires work at the level of basic assumptions about the world and the knowledge we might have of it. My particular interest is in aporias or impasses, the stuck places of social research across paradigms. In what follows, I will frame five aporias that I focus on in my teaching to help students work against technical thought and method and toward another way that keeps in play the very heterogeneity that is, perhaps, the central resource for getting through the stuck places of contemporary educational research.

Aporias of objectivity

I would hope that students gain a grounding in the objectivity debates. Much more complicated than the binary of subjective and objective, an understanding of the issues at stake includes wrestling with both what Kuhn (1962) pointed out as the theory-laden nature of facts and the limits of epistemic relativism (Harding, 1993). Whether standpoint theories and the 'strong objectivity' they make possible are useful or 'necessary errors' (Spivak, 1999), the key is that students have awareness of the complications of such issues. While poststructuralism, for example, is often assumed to be against objectivity, art historian Steven Melville argues for 'objectivity in deconstruction' (Melville, 1996) where the nostalgia for transparent presence is put in tension with a respect for the object's capacity to surprise and exceed us in a way that foregrounds the inadequacy of thought to its object. As another example, while feminist research is often assumed to be hegemonically qualitative, Haraway argues for the 'indispensability' of statistics to feminist projects within 'the complex intersubjectivity

of objectivity' where 'impersonal' data provide yet another speculum for increasing the circumference of the visible (1997, p. 199). Such examples illustrate that the objectivity debates are never, finally, settled and that reflexive understanding about how politics, desire and belief structure scientific method (Harding, 1998) is needed across the paradigms.

Aporias of complicity

I would hope students wrestle with the implications of Foucault's cautions regarding the invasive stretch of surveillance in the name of the human sciences, regardless of paradigm. To learn the reflexive skills that allow students to address the instructive complications of situated inquiries toward a less comfortable social science requires troubling both what Murdock (1997) calls the 'righteous disdain for statistics' (1997, p. 181) and the privileging of ethnography as a research practice. As Asad notes, in an article on ethnography and statistics as modern power, statistics is a language, a discourse, 'contestable but indispensable' (1994, p. 78), a practical technology, a 'strong language' that has been able to ignore philosophy (p. 79). Profoundly interventionist in the history of the welfare state, statistics has served as a political tool in the theatre of persuasion in a way that maps onto the recognized needs of policy-makers. Reading Kuhn and Foucault does not mean the end of quantitative methods but the historicizing and troubling of all paradigms as not innocent, with qualitative as dangerous as quantitative. As Stacey argues (1988), because of the more intimate relations of fieldwork there is a higher risk of misusing participant trust than with quantitative methods. Refusing to situate qualitative as the 'good' to the 'bad' of quantitative, what would it mean for qualitative researchers to be positive toward quantification? This is not so much for reconciliation or 'mixed methods' research designs that too often relegate qualitative to the handmaiden of quantitative, but in order to be reflexive about the need for larger frames toward deeper understanding, especially macro-level demographic and economic changes, e.g. the 'statistical analysis coupled with freedom and justice-oriented policy formations' that Donna Haraway (1997, p. 197) calls for.[14] Speaking of biology as a knowledge-producing practice that she values, wants to participate in and make better, Haraway could as well be arguing that 'it matters to contest for a livable' statistics (p. 281) within an understanding of the 'important but fraught history' of statistical analysis within the broadening of democracy (p. 199).

Aporias of difference

I would hope that students across the paradigms come to see the way identity categories of difference structure our knowing. To look, for example, at the gender aspects of demarcation issues is to trouble scientific asceticism in the church of science, to bring in women's messy subjectivity toward a modest witness, a 'good enough' science aware of epistemological ferment but not paralyzed by it. This is what Donna Haraway (1997) terms a commitment to science in the making, science as a cultural

practice and practice of culture, something to think with rather than a mastery project. Far more than the inclusion of gender as a variable, this is about how gender structures our very sense of what is possible in the name of research. Particularly important here are theories of intersectionality that provide a non-reductionist framework for the complicated and complicating ways that different differences interact and shift across various contingencies to shape all aspects of our lives, including our research imaginaries (e.g. Crenshaw, 2000; McCall, 2005).

Finally, in terms of issues of mixed methods[15] in the context of research across cultural differences, Scheurich and Young (1997) call for qualitative approaches with 'epistemologically friendly clothes' that feel right on the bodies of the bodies that are so new to the academy in any kind of numbers that approach critical mass. In contrast, Linda Tuhiwai Smith calls for power-sensitive research across the paradigms, including 're-inscription of positivist approaches' (1999, p. 189). In a section on 'Kaupapa Maori research and positivism,' Tuhiwai Smith argues for 'interfaces' between Maori needs and the sort of quantitative research that both attracts funding and 'has a connectedness at a common sense level with the rest of society' (p. 189), but only within a context of 'fierce' examination of its processes and power arrangements. In short, research that attends to issues of power can go on across paradigms, if researchers are trained to attend to such matters.

Aporias of interpretation

I would hope that students learn to complicate transparent theories of language. In terms of qualitative data, recent calls to 'let the voices speak for themselves' assume that interview transcripts can be read as simple expressions of experience. In contrast is the practice of qualitative researchers such as St Pierre (1997) who uses theory as a way to honor the data, as a way of doing justice to what it has to tell us about living in this complicated world. Hollway and Jefferson (1997) suggest what they call the 'double interview' to address tendencies to either take at face value self-reports or impose researcher meanings. They advise a first preliminary interview, read symptomatically for absences and contradictions, and a second interview read to pick up on slippages, 'inconsistencies, avoidances and changes of emotional tone' that neither takes respondents at face value nor overrides participant meaning frames. The task is to listen for the sense people make of their lives in order to attend to how thinking gets organized into patterns, how discourses construct and constitute with a sensitivity to issues of appropriation that does not revert to romantic 'too easy' ideas about 'authenticity' in negotiating the tensions between both honoring the 'voices' of research participants and the demand for interpretive work on the part of the inquirer (Lather, 2000).

Issues of interpretation are brought home to quantitative researchers in Liz Stanley's (1990) edited collection on feminist research that has a section on 'demolishing the quantitative v. qualitative divide.' Three examples of quantitative research are 'deconstructed' for how statistics construct rather than mirror the social, how 'subjectivism' is as central to more traditional methods as it is to interpretive ones, and how

data reduction operates in similar ways across both quantitative and qualitative data (Farran, 1990, p. 101). Pugh argues for a place for statistics in feminist as well as other research as long as the researcher is seen as central to the construction of data and the monopoly of statistics as 'correct practice' is challenged (1990, p. 112). Finally, in a study comparing a case study of elder care with various social services statistical databases, Stanley argues for connecting human relationships to numerical research products, what she terms 'a different and less static kind of statistics' (1990, p. 116), that attends to the social relations underlying statistical data. In short, a wide range of analytic skills are called for, with none being automatically assumed to be 'more' or 'less' feminist. The key is that all locate the researcher within the context of the research in a way that disrupts 'subjective/objective' binaries and accounts for the conditions of its own production.[16]

Aporias of legitimization

Finally, I would hope that students learn to think in complicated ways about validity. In her *Educational Researcher* article, Pam Moss (1996) posits the fallibility and constitutive workings of knowledge claims, the ethical and political implications of epistemological choices, the historical and culturally situated nature of frameworks, the dialectic between researcher and researched, the constraining as well as useful effects of our categories, and the role of power in constructing coherent interpretations. 'Who has the authority to construct and evaluate knowledge claims,' she asks in her conclusion (p. 26), as she cautions against 'a priori criteria abstracted from existing practices.' Moss's expansion of validity echoes Mishler's (1990) argument that the 'problem' of validity is about deep theoretical issues that technical solutions cannot begin to address.

Ever since Cronbach and Meehl's 1955 essay on the problems of construct validity in psychological testing, validity has been the problem, not the solution. This is the case across the paradigms where approaches to validity are always partial, situated, temporary. Whether quantitative or qualitative, how scientific knowledge is made credible is a longstanding issue. Steven Epstein's (1996) *Impure science*, about AIDS, activism and the politics of knowledge, documents a contemporary example of how scientific fact-making occurs in politicized environments. Epstein's major point is not just that the 'context of discovery' is no longer separable from the 'context of justification.' His much more dramatic point is that the very 'calculus of credibility' of what is deemed 'good science,' the very determination of warrants of validity has shifted in the science of clinical trials in medical research with great implications for the research training of PhD students in education. The dominance of logical positivism that undergirds the quantitative tradition and the consequent narrow focus on methodological 'rigor' are challenged by 'expanding the research education curriculum' to include foundational knowledge in history, philosophy, sociology and ethics of inquiry regardless of paradigmatic affiliation (Paul & Marfo, 2001, p. 525).

In terms of validity in qualitative research in education, there is much debate as to 'the validity of the validity question' (Kvale, 1996). Standards and practices that are

grounded in the philosophical assumptions of logical positivism are not appropriate for paradigms based on epistemic indeterminacy, the assumption that knowledge cannot be absolute. The result is a consequent weakening of homogeneous standards and a proliferation of approaches to establishing validity in qualitative research that demonstrates how validity is a 'limit-question' of research, one that repeatedly resurfaces, one that can neither be avoided nor resolved.

In short, a proliferation of available framings complicates the conditions of the legitimization of knowledge, particularly discourses of validity that recognize the power and political dimensions of the issue of demarcation (Lather, 2001). Rather than providing a recipe for establishing legitimacy, recent approaches to validity situate it as not just one of many issues in science, but the crux of the issue: the claims of science to a certain privilege in terms of authoritative knowledge. Here the debate between science and a narrow scientism is brought to a climax, underscoring the need for PhD students to have an awareness of validity as far more than a technical issue solved via correct procedures.

Conclusion: paradigms after Deleuze

Phil Hodkinson (2004) has noted that the 'new orthodoxy' in educational research has arisen as if the postmodern debates never took place although he posits the resurgence of positivism as, at least in part, a reaction to those debates, particularly the anxieties that follow the collapse of foundations. The imposition of neo-positivism and its 'gold standard' of experimental design entails 'a rejection of the complex ideas and language of postmodernism … the reassertion of objective truth and value-neutral facts as unproblematic research ideals' (p. 16).

Against this new orthodoxy, I have endorsed a 'disjunctive affirmation' of multiple ways of going about educational research in terms of finding our way into a less comfortable social science full of stuck places and difficult philosophical issues of truth, interpretation and responsibility. Neither reconciliation nor paradigm war, this is about thinking difference differently, a reappropriation of contradictory available scripts to create alternative practices of research as a site of being and becoming.

In such a place, the task becomes to find a way to work on in the face of both the loss of legitimizing metanarratives and, paradoxically, the imposition of a new orthodoxy. Always already swept up in language games that constantly undo themselves, this is, ultimately, a call for situated methodologies across a Deleuzean landscape of 'a thousand tiny paradigms.' Here hybridities make productive use of being left to work within, against and across traditions that are all positioned within a crisis of authority and legitimization as we search for practices that open to the irreducible heterogeneity of the other. Facing the problems of doing research in this historical time, between the no longer and the not yet, the task is to produce different knowledge and produce knowledge differently.

Doctoral training in educational research can address such issues by taking the aporias or stuck places delineated in this essay as fruitful locations from which to

ground students in the foundational knowledge they need to be part of such a challenge. Across the paradigms, students so trained in the philosophical, ethical and political values that undergird knowledge production will be able to negotiate the constantly changing landscape of educational research far beyond the application of technical methods and procedures. Layering complexity, foregrounding problems, thinking outside easy intelligibility and transparent understanding, the goal is to move educational research in many different directions in the hope that more interesting and useful ways of knowing will emerge.

Notes

1. Chart 2 was published in Sipe & Constable (1996), and is used with permission. Unpublished student chart 3 is used with the permission of Dafina Stewart.
2. The concept of coloring epistemology did not emerge from nothing. Scheurich and Young make clear their grounding in work by scholars of color. New work or that not included in their references includes Lopez and Parker (2003); Delgado (1998); Dillard (2000, in press); Hermes (1998); Ladson-Billings (2000); Lopez (2001); Parker *et al.* (1999); Rains *et al.* (2000); Villenas (1996). See Pillow (2003) for a useful bibliography.
3. Britzman's comments were delivered at an American Educational Research Association 1994 panel, 'But Is It Research?' organized by Robert Donmoyer.
4. Derrida speaks of deconstruction as not a method but as 'something which happens' in Caputo (1997, p. 9). This is the best introduction to deconstruction that I have found.
5. Spivak, for example, refers to 'the fabrication of ethnic enclaves, affectively bonded subcultures' as 'simulacra for survival,' a recoding of 'the abstract collective American "We the People."' Her particular example is Alice Walker's *Africa* 'which reads like an overlay of South Africa over a vaguely realized Nigeria' (1999, p. 172).
6. In terms of 'disciplinary mistakes,' Spivak is referring to the construction of the 'native informant' in anthropology and the practice of 'telling life stories in the name of history.' In terms of 'perhaps we cannot do otherwise,' she is referring to efforts toward 'a rewriting of accountable responsibility as narcissism, lower case' (1999, pp. 249, 251).
7. Foucauldian positivity refers to 'the codes of language, perception, and practice' that arise for awhile and make possible a particular understanding of 'the order of things' (1970, p. xxi). Positivities are some other to 'the order of foundations' (p. 340) that has to do with successor regimes, ontology of continuity and permanent tables of stable differences. In contrast, the order of positivities is an 'analytic of finitude' that historicizes discourse formations within 'an ontology without metaphysics' (p. 340). For an elaboration, see Lather (2004c).
8. An earlier version of this section was published as Lather (2005).
9. Eisenhart and DeHaan (2005) delineate five areas in the training of educational researchers: (1) diverse epistemological perspectives, (2) diverse methodological strategies, (3) the varied contexts of educational practice, (4) the principles of scientific inquiry, and (5) an interdisciplinary orientation (p. 7). They focus on the last two, claiming that the first three have been recently addressed by others. By this, they seem to mean a blurring of the borders between 'hard' and 'soft' sciences as based on social studies of science, citing sociological studies of laboratory life in high-energy physics on the 'hard' side, and interdisciplinary brain research and pharmacological 'enhancement' of learning on the 'soft' side.
10. See Spanos (1993, p. 254), for a discussion of 'problematic' in the Althusserean sense of how research problems get framed and studied.
11. For critique of dialectics, see 'A Preface to Transgression,' in Foucault (1998).
12. Distinctions between scientism and scientificity are key in such arguments. For scientism, see Hayek (1952) and Sorrell (1991). For scientificity, see Foucault (1972). See, also, Lather (in

press), chapter 3: 'Double(d) science, mourning and hauntology: scientism, scientificity and feminist methodology.'
13. See, also, special issues of *Qualitative Inquiry* on 'methodological conservativism,' 10(1) and 10(2), 2004 and *Teachers College Record*, 107(1), 2005.
14. One example would be *Black wealth/white wealth* by Melvin Oliver and Thomas Shapiro (Routledge, 1995) where interviews surfaced an approach to looking at the weight of inherited resource capital in ways that shifted the statistical analysis.
15. See Tashakkari and Teddlie (2002), and Greene (2001).
16. See Fonow and Cook (2005), for a framing of contemporary issues in feminist methodology, including the need for quantitative work in policy analysis.

Notes on contributor

Patti Lather is Professor of Cultural Studies in Education at Ohio State University. Her books include *Getting smart* (1991), *Troubling the angels* (1997, with Chris Smithies), and her in-press *Getting lost: Feminist efforts toward a double(d) science*, with SUNY Press.

References

Asad, T. (1994) Ethnographic representation, statistics and modern power, *Social Research,* 61(1), 55–87.

Balibar, E. (1995) *The philosophy of Marx* (London, Verso).

Berger, P. L. & Luckmann, T. (1966) *The social construction of reality: a treatise in the sociology of knowledge* (Garden City, NY, Doubleday).

Beverly, J. (1996) Pedagogy and subalternity: mapping the limits of academic knowledge, in: R. G. Paulston (Ed.) *Social Cartography* (New York, Garland).

Britzman, D. (1995) Is there a queer pedagogy? Or, stop reading straight, *Educational Theory,* 45(2), 151–165.

Britzman, D. (1997) The tangles of implication, *Qualitative Studies in Education,* 10(1), 31–37.

Britzman, D. (1998) *Lost subjects, contested objects* (Albany, SUNY Press).

Britzman, D. (2000) If the story cannot end, in: R. Simon, S. Rosenberg & C. Eppert (Eds) *Between hope and despair* (Lanham, MD, Rowan and Littlefield).

Butler, J. (1993) *Bodies that matter* (New York, Routledge).

Caputo, J. (Ed.) (1997) *Deconstruction in a nutshell: a conversation with Jacques Derrida* (New York, Fordham University Press).

Crenshaw, K. (2000) Demarginalizing the intersection of race and sex: a black feminist critique of antidiscrimination, in: J. James & T. D. Sharpley-Whiting (Eds) *The black feminist reader* (Malden, MA, Blackwell).

Cronbach, L. & Meehl, P. (1955) Construct validity in psychological tests, *Psychological Bulletin,* 52, 281–302.

Delgado, B. (1998) Using a Chicana feminist epistemology in educational research, *Harvard Educational Review,* 68(4), 555–579.

Dillard, C. (2000) The substance of things hoped for, the evidence of things not seen: Examining an endarkened feminist epistemology in educational research and leadership, *Qualitative Studies in Education,* 13(6), 661–681.

Dillard, C. (in press) *On spiritual striving: transforming an African American Woman's academic life* (Albany, NY, SUNY Press).

Donmoyer, R. (2001) The problem—and potential—of paradigm proliferation, in: V. Richardson (Ed.) *Handbook of research on teaching* (4th edn) (Washington, DC, AERA).

Dosse, F. (1999) *Empire of meaning: the humanization of the social sciences,* trans. Hassan Melehy (Minneapolis, University of Minnesota Press).
DuCille, A. (1996) *Skin trade* (Cambridge, MA, Harvard University Press).
Eisenhart, M. & DeHaan, R. (2005) Doctoral preparation of scientifically based education researchers, *Educational Researcher,* 34(4), 3–13.
Eisenhart, M. & Towne, L. (2003) Contestation and change in national policy on 'scientifically based' education research, *Educational Researcher,* 32, 31–38.
Epstein, S. (1996) *Impure science: AIDS, activism and the politics of knowledge* (Berkeley, University of California Press).
Farran, D. (1990) 'Seeking Susan': Producing statistical information on young people's leisure, in: L. Stanley (Ed.) *Feminist praxis: Research, theory and epistemology in feminist sociology* (London, Routledge).
Fonow, M. M. & Cook, J. (2005) Feminist methodology: new applications in the academy and public policy, *Signs,* 30(4), 2211–2236.
Foucault, M. (1970/1966) *The order of things* (New York, Vintage).
Foucault, M. (1972) *The archaeology of knowledge and the discourse of language* (New York, Pantheon).
Foucault, M. (1983) *Foucault reader,* Paul Rabinow, Ed. (New York, Pantheon).
Foucault, M. (1997/1981) *Ethics: subjectivity and truth* (New York, New Press).
Foucault, M. (1998/1970) Theatrum philosophicum, in: J. D. Faubion (Ed.) *Aesthetics, method, and epistemology,* Robert Hurley and others, Trans. (New York, New Press).
Greene, J. (2001) Mixing social inquiry methodologies, in: V. Richardson (Ed.) *Handbook of research on teaching* (4th edn) (Thousand Oaks, CA, Sage).
Grosz, E. (1994) A thousand tiny sexes: feminism and rhizomatics, in: C. V. Boundas & D. Olkowski (Eds) *Giles Deleuze and the theatre of philosophy* (New York, Routledge).
Haraway, D. (1997) *Modest witness* (New York, Routledge).
Harding, S. (1991) *Whose science? Whose knowledge?* (Bloomington, Indiana University Press).
Harding, S. (1993) Rethinking standpoint epistemology: what is 'strong objectivity'? in: Linda Alcoff & E. Potter (Eds) *Feminist epistemologies* (New York, Routledge), 49–82.
Harding, S. (1998) *Is science multicultural: postcolonialisms, feminisms, and epistemologies* (Bloomington: Indiana University Press).
Hardt, M. & Negri, A. (2000) *Empire* (Cambridge, MA, Harvard University Press).
Hardt, M. & Negri, A. (2004) *Multitudes: war and democracy in the age of empire* (New York, Penguin Books).
Haver, W. (1997) Queer research: or how to practice invention to the brink of intelligibility, in: S. Golding (Ed.) *The Eight technologies of otherness* (New York, Routledge).
Hayek, F. A. (1952) *The counter-revolution of science: studies in the abuse of reason* (Glencoe, IL, Free Press).
Hermes, M. (1998) Research methods as a situated response: towards a First Nations methodology, *Qualitative Studies in Education,* 13(4), 155–168.
Hodkinson, P. (2004) Research as a form of work: expertise, community and methodological objectivity, *British Educational Research Journal,* 30(1), 9–26.
Hollinger, R. (1994) *Postmodernism and the social sciences* (Thousand Oaks, CA, Sage).
Hollway, W. & Jefferson, T. (1997) Eliciting narrative through the in-depth interview, *Qualitative Inquiry,* 3(1), 53–70.
Howe, K. (2004) A critique of experimentalism, *Qualitative Inquiry,* 10(1), 42–61.
Kuhn, T. (1962) *The structure of scientific revolutions* (Chicago, University of Chicago Press).
Kvale, S. (1996) *InterViews* (Thousand Oaks, CA, Sage).
Laclau, E. & Mouffe, C. (1985) *Hegemony and socialist strategy,* W. Moore & P. Cammack, Trans. (London, Verso).
Ladson-Billings, G. (2000) Racialized discourses and ethnic epistemologies, in: N. Denzin & Y. Lincoln (Eds) *Handbook of qualitative research* 2nd edn) (Thousand Oaks, CA, Sage).

Lather, P. (1991) *Getting smart: Feminist research and pedagogy with/in the postmodern* (New York, Routledge).
Lather, P. (2000) Reading the image of Rigoberta Menchu: undecidability and language lessons, *Qualitative Studies in Education,* 13(2), 153–162.
Lather, P. (2001) Validity as an incitement to discourse: Qualitative research and the crisis of legitimation, in: V. Richardson (Ed.) *Handbook of research on teaching* (4th edn) (Washington DC, AERA), 241–250.
Lather, P. (2004a) This *is* your father's paradigm: governmental intrusion and the case of qualitative research in education, *Qualitative Inquiry,* 10(1), 15–34.
Lather, P. (2004b) Scientific research in education: a critical perspective, *British Educational Research Journal,* 30(6), 759–771.
Lather, P. (2004c) Foucaulidan 'indiscipline' as a sort of application: qu(e)er(y)ing research/policy/practice, in: B. Baker & K. Hayning (Eds) *Dangerous coagulations: the uses of Foucault in the study of education* (New York, Peter Lang).
Lather, P. (2005) From competing paradigms to disjunctive affirmation: teaching research methodology in education, in: C. Hancock & P. Paul (Eds) *Essays on the role and nature of research within the PhD program in education* (Columbus, The Ohio State University).
Lather, P. (in press) *Getting lost: feminist efforts toward a double(d) science* (Albany, NY, SUNY Press).
Levinson, M. (1995) Pre- and post-dialectical materialisms: modeling praxis without subjects and objects, *Cultural Critique,* Fall, 111–127.
Lopez, G. & Parker, L. (Eds) (2003) *Interrogating racism in qualitative research methodology* (New York, Peter Lang).
Lopez, G. (2001) Re-visiting white racism in educational research: Critical Race Theory and the problem of method, *Educational Researcher,* 30(1), 29–33.
Lyotard, J. F. (1974) *Libidinal economy* (Paris: Editions de Minuit).
Lyotard, J. F. (1984) *The postmodern condition: a report on knowledge,* G. Bennington & B. Massumi, Trans. (Minneapolis, University of Minnesota Press).
May, T. (1994) *The political philosophy of poststructuralist anarchism* (University Park, Pennsylvania State University Press).
McCall, L. (2005) The complexity of intersectionality, *Signs,* 30(3), 1771–1800.
Melville, S. (1996) Color has not yet been named: objectivity in deconstruction, in: J. Gilbert-Rolfe (Ed.) *Seams: art as philosophical context* (Amsterdam, G&B Arts), 129–146.
Mishler, E. (1990) Validation in inquiry-guided research: the role of exemplars in narrative studies, *Harvard Educational Review,* 60(4), 415–442.
Moss, P. (1996) Enlarging the dialogue in educational measurement: voices from interpretive research traditions, *Educational Researcher,* January–February, 20–28, 43.
Murdock, G. (1997) Thin descriptions: questions of method in cultural analysis, in: J. McGuigan (Ed.) *Cultural methodologies* (Thousand Oaks, CA, Sage).
National Research Council (2002) *Scientific research in education,* R. J. Shavelson & L. Towne, Eds (Washington, DC, NRC).
Nietzsche, F. (1961) *Thus spoke Zarathustra,* R.J. Hollingdale, Trans. (Harmondsworth, Penguin).
Niranjana, T. (1992) *Siting translation: history, post-structuralism and the colonial context* (Berkeley, University of California Press).
Pallas, A. M. (2001) Preparing education doctoral students for epistemological diversity, *Educational Researcher,* 30(5), 6–11.
Parker, L., Dehyle, D. & Villenas, S. (Eds.) (1999) *Race is … race isn't/Critical Race Theory and qualitative studies in education* (Boulder, CO, Westview Press).
Paul, J. L. & Marfo, K. (2001) Preparation of educational researchers in philosophical foundations of inquiry, *Review of Educational Research,* 71(4), 525–547.
Pillow, W. (2003) Race-based methodologies: multicultural methods or epistemological shifts?, in: G. Lopez & L. Parker (Eds) *Interrogating racism in qualitative research methodology* (New York, Peter Lang).

Pugh, A. (1990) My statistics and feminism—a true story, in: L. Stanley (Ed.) *Feminist praxis: research, theory and epistemology in feminist sociology* (London, Routledge).
Rains, F., Archibald, J. A. & Dehyle D. (Eds) (2000) Special issue: Thorough our eyes and in our own words—the voices of indigenous scholars, *Qualitative Studies in Education,* 13(4).
Ross, A. (Ed.) (1996) *Science wars* (Durham, NC, Duke University Press).
Saleem, D. (1999) *Islam matters: qualitative lessons from the legacy of a Muslim African-American educator,* unpublished dissertation, Ohio State University).
Scheurich, J. & Young, M. (1997) Coloring epistemologies: are our research epistemologies racially biased?, *Educational Researcher,* 26(4), 4–16.
Sipe, L. & Constable, S. (1996) A chart of four contemporary research paradigms: metaphors for the modes of inquiry, *Taboo: The Journal of Culture and Education,* 1(Spring), 153–163.
Sommer, D. (1996) No secrets, in: G. Gugelberger (Ed.) *The real thing: testimonial discourse and Latin America* (Durham, NC, Duke University Press).
Sorrell, T. (1991) *Scientism: philosophy and the infatuation with science* (London, Routledge).
Spanos, W. (1993) *The end of education* (Minneapolis, University of Minnesota Press).
Spivak, G. (1987) *In other worlds: essays in cultural politics* (New York, Methuen).
Spivak, G. (1999) *A critique of postcolonial reason: toward a history of the vanishing present* (Cambridge, MA, Harvard University Press).
St Pierre, E. (1997) Circling the text: nomadic writing practices, *Qualitative Inquiry,* 10(3), 403–417.
St Pierre, El. (2000) The call for intelligibility in postmodern educational research, *Educational Researcher,* 29(5), 25–28.
Stacey, J. (1988) Can there be a feminist ethnography?, *Women's Studies International Forum,* 11, 163–182.
Stanley, L. (1990) 'A referral was made': behind the scenes during the creation of a social services department 'elderly' statistic, in: L. Stanley (Ed.) *Feminist praxis: research, theory and epistemology in feminist sociology* (London, Routledge).
Stanley, L. (Ed.) (1990) *Feminist praxis: research, theory and epistemology in feminist sociology* (London, Routledge).
Tashakkari, A. & Teddlie, C. (Eds) (2002) *Handbook of mixed methods in the social and behavioral sciences* (Thousand Oaks, CA, Sage).
Tuhiwai Smith, L. (1999) *De-colonizing methodology: research and indigenous peoples* (London, Zed Books).
Tyson, C. (1998) A response to coloring epistemologies, *Educational Researcher,* 27(10), 21–22.
Villenas, S. (1996) The colonizer/colonized Chicana ethnographer: identity, marginalization, and co-optation in the field, *Harvard Educational Review,* 66, 711–731.
Willinsky, J. (2001) The strategic education research program and the public value of research, *Educational Researcher,* 30(1), 5–14.