

Foucauldian Scientificity: Rethinking the Research, Policy, Practice Nexus

Patti Lather

AESA, November, 2005

Symposium: The Uses of Foucault in Educational Policy Analysis

The nature of scientificity is on the feminist agenda (Lather, 2005; Wilson, 1998). I first encountered the term in my reading of Foucault and began a kind of genealogy of it once I noticed that I was slipping between scientificity and scientism in my in-process book, *Getting Lost: Feminist Efforts Toward a Double(d) Science*. This paper, then, is part on an on-going project in probing the uses of a reinscribed scientificity in the “science wars,” particularly as those wars play out in what might be termed the “rage for accountability” in educational research. Foucault’s ideas concerning the thresholds of positivity, epistemologization, scientificity and formalization in the human sciences will be used to argue against the methodological reductionism in US policy discourse and how this affects the research, policy, practice nexus.

This Cloudy Distribution

My work? . . . There is beneath that which science knows of itself something that it does not know. . . I have tried to extricate. . . the unconscious of knowledge. (Foucault in Davidson, 1997, p. 7)

In *The Order of Things*, Foucault (1970) advises that, rather than looking for a coherent definitional field, we attend to the overlapping, contradictory, and conflictual definitional forces that don’t oversimplify our pursuit of a counter-science. Rather than the “physics envy” that characterizes the parade of behaviorism, cognitivism, structuralism, and neopositivism, he posits a social science that takes values and power

seriously.¹ Against the objectivist strands with their failure to successfully study human activity in a way modeled after the assumedly cumulative, predictive, and stable natural or “exact” sciences, Foucault locates the human sciences in the interstices of the mathematizable and the philosophical. “This cloudy distribution” (p. 347) is both their privilege and their precariousness. “Dangerous intermediaries in the space of knowledge” (p. 348), essentially unstable, uncertain as sciences, “the complexity of the epistemological configuration in which they find themselves” (p. 348) is their particular positivity.²

As what Nietzsche terms the “unnatural sciences” (1974, p. 301), they are opposed to the “great certainty” of the natural sciences by their address to language, meaning, the limits of consciousness, and the role of representations: the stuff of human seeking to know. Rather than lacking in exactitude and rigor, the human sciences are more a “‘meta-epistemological’ position” in being about “finitude, relativity, and perspective” (Foucault, 1970, p. 355). Here their very “haziness, inexactitude and imprecision” (p. 355) is the surface effect of the forms of positivity proper to the human sciences: “blurred, intermediary and composite disciplines multiply[ing] endlessly” (p. 358). Across the biological (Comte) and economic (Marx) models of earlier centuries, we arrive via the linguistic/interpretive turn (Freud) to a focus on the need for a “reflexive form of knowledge” where there is “always something still to be thought” (p. 372). The “primacy of representation” is “the very field upon which the human sciences occur” (pp. 362-363). “Unveil[ing] to consciousness the conditions of its forms and contents” (p. 364) is its task.

Whether this is “truly scientific” or not is a “wearisome” discussion (Foucault, 1970, p. 365). The human sciences do not answer to criteria of objectivity and systematicity, the formal criteria of a scientific form of knowledge, but they are within the positive domain of knowledge as much as any other part of the modern episteme. There is no internal deficiency here; they are not “stranded across the threshold of scientific forms” (p. 366). They are not “false” sciences; “they are not sciences at all” (p. 366). They assume the title in order to “receive the transference of models borrowed from the sciences” (p. 366). Trying for some years now to understand what that sentence means, I found some help in a book on deconstruction and the remainders of phenomenology that uses Foucault to look at the human sciences. Working this section of *The Order of Things* very closely in relation to Husserl, the author, Tilottama Rajan (2002) unpacks this to mean that the human sciences are necessarily situated between positivity and reflexivity, “surreptitiously,” de-mathematizing in ways that have an “entirely unconscious” deterritorializing effect on “the cartography of knowledge.” Unable to achieve “the transcendence that Husserl sought through geometry,” unable to be their own foundation, they “mimic the sciences, thus marking both themselves and the sciences with the negativity of being what they are not and not being what they are.” This “doubling” sort of move situates the human sciences as “the unconscious of the sciences” (p. 194).

Enacting “a perpetual principle of dissatisfaction, of calling into question, of criticism and contestation” (Foucault, 1970, p. 373), such knowledges are tied to a praxis of the representations we give to ourselves of ourselves, a “counter-science” (p. 379) that “unmakes” us as it “traverse[s], animate[s], and disturb[s] the whole constituted field of

the human sciences. . . threatening the very thing that made it possible for man to be known” (p. 381). Here is where we learn to think again, “in the process of disappearing” (p. 385), opening ourselves to a future thought of the knowledge of things and their order.

In short, by “counter-science,” Foucault is referring to those knowledges that “‘unmake’ that very man who is creating and re-creating his positivity in the human sciences” (1970, p. 379). Noting how his own work is tied to “that strange and quite problematic configuration of human sciences” (1998, p. 311), Foucault’s interest is in “undoing and recomposing” the very ground he stands on. Here demarcation issues are refused, distinctions are seen as uncertain and “the play of immediacies” becomes the point of analysis (p. 306).

The “privilege accorded to . . . ‘the sciences of man’” is based on the “‘political arithmetic’” (1998, p. 323) that makes particular kinds of discourse both possible and necessary. Claims to scientificity are discursive events. Such an understanding of the human sciences is more about “the play of its differences, its interstices, its distances—in some sense its blanks rather than its full surfaces” (p. 321) than it is about foundational epistemological claims, “unfold[ing] as broadly as possible” the historical space in which it has come to rest (p. 327).

Against a narrow scientificity, a social science that approaches what Bourdieu terms “‘fieldwork in philosophy’” (quoted in Flyvbjerg, 2001, p. 167) articulates Foucault’s point that real change comes from changing our selves, our bodies, our souls, our ways of knowing (1991). To make difficult what we take for granted as the good, to see, in fact, what Nietzsche saw: that perhaps “there has never been a more dangerous ideology. . . than this will to good” (Flyvbjerg, 2001, p. 95). This is the first step in becoming moral,

this realization that, in Foucauldian terms, “. . . everything is dangerous, which is not exactly the same as bad. If everything is dangerous, then we always have something to do” (Foucault, 1983, p. 343).

Foucault is most useful in seeing how, in the continuation of the science wars, the line between a narrowly defined scientism and a more capacious scientificity of disciplined inquiry remains very much at issue. In terms of the desirability of degrees of formalization, mathematized and not, generic procedures, and rigorous differentiations, there is virtually no agreement among scientists, philosophers and historians as to what constitutes science except, increasingly, the view that science is a cultural practice and practice of culture. What, then, is a Foucaultian take on scientificity?

Foucauldian Scientificity: Undoing Positivity

I first ran across the term scientificity in my reading of Foucault and have since found that scientificity has long been at the heart of the demarcation debates. But one example is the “scientificity of psychoanalysis,” the seemingly endless adjudications over the scientificity of Freud (Leupin, 1991). Also of note here would be the desperate quest across various fields for scientificity, from economists (Cullenberg, Amariglio and Fuccio, 2001) to the Institute of Educational Sciences and its determination to counter the “explosive growth of qualitative research studies” by funding only those studies that adhere to its “methodological orthodoxy” of experimental design (Bryant, 2004, p. 5). From Popperian falsifiability to Lakatosian research programmes, from criteria of testability and prediction to more recent pronouncements on reliability and generalizability (National Research Council, 2002), scientificity is about the constitution of science as science. While the recognition that science is evolving, social and historical

is oftentimes spotty, even in philosophy of science where one might expect better, the criteria of scientificity are much debated.

Historically, scientificity in the social sciences has been based on measurability, the degree to which an area resembled inquiry in physics (Rorty, 2001). Two generations of post-Kuhnian work has “done its best to fuzz up the logic-rhetoric and hard-soft distinctions” (Ibid.). While what Nancy Cartwright (1999) terms “scientific fundamentalists” still hold to the task of demarcation, focus has shifted to the general structure of scientificity with openness to specific disciplinarity. Here scientificity is continuously adapted to new contingencies. Isabelle Stengers (1997), for example, argues that scientificity is a productive constraint. Getting access to the singularity of scientific activity in the drive to address what makes a science a science, the pre-existent, neo-positivist criteria are but one form in "the criteria of scientificity that are currently on the market" (p. 81). Conditions of scientificity can be mutilating; they can construct object and question in a unilateral way, drawing on social power, eliminating a priori anything that does not appear to guarantee an objective approach (p. 146). Most importantly to Stengers, it is “trivial” to solve the problem of what science is by defining science “through its objectivity” (1997, p. 81).

In mapping such territory, Foucault describes the thresholds of positivity, epistemologization, scientificity and formalization in his *Archeology of Knowledge* (1972, p. 186). His interest is in how discourses that have the status of scientificity or pretensions to it function as an element of knowledge in presenting the formal criteria of a science (p. 184). What he does here is localize science in the framework of more general knowledge. He looks at how a science structures certain of its objects, systematizes parts

of it, formalizes, underwrites strategies: here science finds its place (p. 185) where it functions among other practices; here is its ideological function (p. 185). "Ideology is not exclusive of scientificity," Foucault writes (p. 186), and the role of ideology does not diminish as rigor increases and error is dissipated. For those who know their Althusser, this is quite another cup of tea than the science/ideology distinctions that formerly reigned in the Marxist claim to scientificity. To tackle the ideological functioning of a science is to take on the "system of formation of its objects, its types of enunciation, its concepts, its theoretical choices. It is to treat it as one practice among others" (p. 186).³ Foucault's question is "what is it for that science to be a science" (p. 192) His answer is that to focus on demarcation criteria is to miss how "all the density of the disconnections, the dispersion of the ruptures, the shifts in their effects, the play of the interdependence are reduced to the monotonous act of an endlessly repeated foundation" (p. 188).

What Foucault helps us see is how the methodological reductionism that has radically flattened the methods into a single model is being displaced by a sort of situated scientificity that neither constricts "science" to one or two privileged models nor allows an anything goes arbitrary concept of science. While a general attitude of and emphasis on rigor and objectivity are part of a "plurality of models and types of scientificity suitable for the requirements of diverse fields," different but compatible models of scientificity are elaborated across disciplinary sites while working to avoid methodological fragmentation. In addition, recent exhortations to scientificity are more rhetorically sophisticated in urging adherence to scientific norms.⁴ Here scientificity becomes a performance, for example the textual display of the absence of the author and/or the veneer of scientificity accomplished by the use of mathematics.⁵ Bourdieu

(1990) writes of this as “to simulate scientific rigor” (p. 37), “imitat[ing] the advanced sciences” (p. 39) in his argument against positivist orthodoxy and its “false rigours” (p. 40).

In this context of proliferating, situated, rhetorically inflected scientificities, the judgment criteria for scientificity enacts an on-going crisis. The question of what makes a science a science is about much more than the typical Popperian or even Kuhnian sorts of demarcation projects that have historically dominated in framing such questions. In sum scientificity is an arena of struggle in broadening the definition of science. Given that the human sciences work with a vague concept of data, traditional notions of rigor are thwarted, especially epistemological definitions of objectivity. Socio-cultural context matters here, unavoidably. Focus shifts to the proper characterization of the object, not control of the subjectivity of the knower. A science defines its own scientificity by elaboration of the conditions that determine the objects of a science and data about them. These are methodologically built objects located between radical constructivism and objectivism, both found and made, always caught in flux, in-the-making. Here the “irreducible, irresolvable, and utterly necessary” interpretation that has historically been excluded from received understandings of science (Wilson, 1998, p. 79) is positioned as the generative undecidability that is constitutive of science itself. What are the implications of this for the research/policy/practice nexus?

The Uses of Foucault in Educational Policy Analysis

Given renewed interest at the federal level in the relationship of educational research, policy and practice, what would it mean to put Foucault to work to foreground the complications and interrupt assumptions of a tidy, linear relationality?

In Foucauldian terms, policy is one of the three technologies of governmentality, the others being diplomatic/military and economic. Policy is to regulate behavior and render populations productive via a “biopolitics” that entails state intervention in and regulation of the everyday lives of citizens in a “liberal” enough manner to minimize resistance and maximize wealth stimulation. Naming, classifying and analyzing: all work toward disciplining through normalizing. Such governmentality is “as much about what we do to ourselves as what is done to us” (Danaher et al., 2000, p. 83). It is, contrary to those who see Foucault as a pessimist and determinist, about how understanding such processes might raise possibilities for doing otherwise. In terms of the recent governing mentality of educational research, the “privilege accorded to ...’the sciences of man’ “ is based on the “‘political arithmetic’” (Foucault, 1998, p. 323) that makes particular kinds of discourse both possible and necessary. Such a way of making sense of how power/knowledge works is not so much about concepts on their way to formation or even the price paid for scientific pretensions, but rather of understanding claims to scientificity as discursive and political events. Here the “inexact knowledges” become “a field of strategic possibilities” (1998, p. 320, original emphasis), a “counter-science” of policy analysis that troubles what we take for granted as the good in fostering understanding, reflection and action.

Suggestive here is *Making Social Science Matter* (2001) by Bent Flyvbjerg, a Danish urban developer, who argues for a move from a narrowly defined epistemic science to one that articulates a social science that integrates context-dependency with practical deliberation. Here considerations of power are brought to bear in delineating a knowledge adequate to our time. Rather than the objectivist strands of the social sciences,

this is a social science that can contribute to society's practical rationality in clarifying where we are and where we want to be. Case studies assume prime importance as critical cases, strategically chosen, provide "far better access for policy intervention than the present social science of variables: (2001, p. 86). Simultaneously sociological, political and philosophical" (Flyvbjerg, 2001, p. 64), this is a kind of science that does not divest experience of its rich ambiguity because it stays close to the complexities and contradictions of existence. Its goal is to foster understanding, reflection and action instead of a narrow translation of research into practice.

Let me nail this point: I am arguing for a critical qualitative presence in fuzzifying the lines between empirical research, politics, and the philosophical renewal of public deliberation. An area that has moved dramatically along this front is environmental science. Amplifying ideas of "democratic accountability" (Behn, 2001), scientific expertise is being refashioned along participatory lines toward a kind of "civic science" that brings policy-makers and citizens together (Backstrand, 2003). At the heart of the argument is Beck's (1992) notion of "reflexive scientization" that replaces "traditional objectivist accounts of science by a more inclusive science that institutionalizes self-doubt, self-interrogation and self-reflexivity" (Backstrand, 2003, p. 33). This is a "sea change in conceptualization of accountability" (Weber, 1999, p. 453) that might be useful in using Foucault to rethink the research, policy, practice nexus.

Conclusion

Efforts at reform and change must, and will, continue. Applied social scientists ...will ...be faced with the fundamental problem that the very practices they wish to alter will tend to frustrate their efforts ...Confronting

this “problem” ...is the essential first step towards a better form of practice ...one that consists of a willingness to work with, rather than against, the actors in the domain of application; one that is collaborative rather than imperious; modest rather than megalomaniac; and wishing to learn rather than itching to instruct. (Ashmore et al., 1989, p. 195)

Ashmore et al. are writing of long-running efforts in Britain to use economics to rationalize health care. Like efforts to shift the meanings of scientifically based research in education, many issues are at play in their work, including the Science Wars and the management needs of neo-liberal states. Also at play are academic capitalism, entrepreneurship and ambition. In short, something complicated is happening here and high stakes are involved.

In improving the quality of practice, complexity and the messiness of practice-in-context cannot be fantasized away. To try to do so yields impoverishment rather than improvement. That loss is being borne by the children, teachers, and administrators in our schools.

My hope in this paper is that the efforts of educational researchers to speak out against the federal legislating of scientific method will contribute to a “next move” that will be much more about government as handmaiden than government as unilateral force in pushing things in a useful direction. To do so requires a form of applied social science that can cope with the multiplicity of the social world, not a reified medical model by no means central in medicine itself (Howe, 2004). What is at question is the adequacy of standard methods, the desirability of research and policy goals, and the philosophies of science that prescribe narrow views of these issues.

Foucault writes of the “absolute optimism” of “a thousand things to do” (1991, p. 174) in our constant struggle against the very rules of reason and practice inscribed in the effects of power of the social sciences. For those attentive to the demands of different contexts and different communities, my argument is that there is plenty of future for an applied social science that can engage strategically with the limits and the possibilities of the uses of research for social policy toward the improvement of practice.

References

- Ashmore, M., Mulkay, M. and Pinch, T. (1989) Health and efficiency: A sociology of health economics. Milton Keynes: Open University Press.
- Backstrand, Karin (2003) Civic science for sustainability: Reframing the role of experts, policy-makers and citizens in environmental governance. Global Environmental Politics, 3(4), 24-41.
- Beck, Ulrich (1992) Risk society: Towards a new modernity. London: Sage.
- Behn, Robert D. (2001) Rethinking democratic accountability. Washington DC: Brookings Institution Press.
- Bourdieu, Pierre (1990) In other words: Essays toward a reflexive sociology. NY: Polity Press.
- Bryant, Miles (2004) Forcing change in educational research. TEA/SIG, Division A, AERA, Fall, 11(2), p. 5.
- Cartwright, Nancy (1999) The dappled world: A study of the boundaries of science. Cambridge: Cambridge University Press.
- Cullenberg, Stephen, Jack Amariglio and David F. Fuccio, eds. (2001) Postmodernism, economics and knowledge. London: Routledge.
- Danaher, G., Chirato, T. and Webb, J. (2000) Understanding Foucault. London: Sage.
- Davidson, Arnold (1997) Structures and strategies of discourse: Remarks toward a history of Foucault's philosophy of Language. Pp. 1-17 of Foucault and his interlocutors, A. Davidson, ed. Chicago: University of Chicago Press.

- Flyvbjerg, Bent (2001) Making social science matter: Why social inquiry fails and how it can succeed again. Cambridge: Cambridge University Press.
- Foucault, Michel (1970) The order of things: An archaeology of the human sciences. New York: Vintage Books.
- (1972) The archaeology of knowledge and the discourse on language. (A.M. Sheridan, Trans.). NY: Pantheon.
- (1983) On the genealogy of ethics: An overview of work in progress. Pp. 340-372 in Paul Rabinow (Ed.) The Foucault Reader. New York: Pantheon.
- (1998) On the archaeology of the sciences: Response to the epistemology circle. Pp. 297-333 in J. Faubion (Ed.) Michel Foucault: Aesthetics, method, and epistemology (vol. 2). New York: The Free Press.
- Fuller, Steve (1997) Science. Mpls: University of Minnesota Press.
- Fuller, Steve and James Collier (2003) Philosophy, rhetoric, and the end of knowledge: A new beginning for science and technology. Hillsdale NJ: Lawrence Earlbaum.
- Lather, Patti (2004) Foucauldian “indiscipline” as a sort of policy application. Pp. 279-303 in Bernadette Baker and Katy Hayning (Eds.) Dangerous coagulations? The uses of Foucault in the study of education. New York: Peter Lang.
- (2005, April) Scientism and Scientificity in the Rage for Accountability. Paper presented at the annual conference of the American Educational Research Association, Montreal.
- Leupin, Alexandre (1991) Introduction: Voids and knots in knowledge and truth. Pp. 1-23 of Lacan & the Human Sciences, A. Leupin, ed. Lincoln: University of Nebraska Press.

Marini, Marcelle (1992) Jacques Lacan: The French context. Trans. Anne Tomiche. New Brunswick NJ: Rutgers University Press.

National Research Council (2002) Scientific Research in Education, Richard Shavelson and Lisa Towne (Eds.). Washington DC: NRC.

Nietzsche, Friedrich (1974/1887) The gay science. Trans. Walter Kaufmann. New York: Vintage.

Plotnitsky, Arkady (2000) On Lacan and mathematics. Pp. 247-276 of Lacan in America, Jean-Michel Rabate, ed. NY: Other Press.

Rajan, Tilottama (2002) Deconstruction and the remainders of phenomenology: Sartre, Derrida, Foucault, Baudrillard. Stanford: Stanford University Press.

Stengers, Isabelle (1997) Power and invention: Situating Science. Mpls: University of MN Press.

Weber, Edward P. (1999) The question of accountability in historical perspective. Administration and Society, 31(4), 451-494.

Wilson, Elizabeth (1998) Neural Geographies: Feminism and the Microstructures of Cognition. New York: Routledge.

¹ The phrase, physics envy, was used in the *New York Review of Books* as credited to Freud (Flyvbjerg, 2001, 26-27). It is, interestingly, used in the 2002 National Research Council report, *Scientific Research in Education*, without attribution (p. 13.)

² 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, xxi). Positivities are some other order to “the order of foundations” (p. 340) which 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.

³ See *Archeology of Knowledge* (1972, pp. 182-187) for the “thresholds of discursive formations.”

⁴ See Fuller and Collier, 2003, for an explicitly sophistic and dialectical approach to rhetoric in the social studies of science. See, also, Fuller, 1997.

⁵ In the “science wars,” Lacan’s mathemes are often held up as a prime example of the “misuse of mathematics” by the human sciences. For the “aggravation” caused to Sokal et al. see Plotnitsky, 2000. But see, Marini, 1992, for an unpacking of mathemes as “a logic that is not a logic” (p. 68) in attempting a theoretical language “that recognizes its uncertainties and contradictions” (p. 69). Mathemes might be looked at as the formalized transmission of not understanding, the formalizing structure of the relationship between terms in order to communicate in shorthand or metaphor the necessary lack of language. Thanks to conversation with Ian Parker and Eric Burman for this “truth of mathemes.”