No exit? Intellectual integrity under the regime of 'evidence' and 'best-practices'

Stuart J. Murray PhD,[1] Dave Holmes RN PhD,[2] Amélie Perron RN[3] and Geneviève Rail PhD[4]

[1]Assistant Professor, Faculty of Arts and School of Graduate Studies, Ryerson University, Toronto, ON, Canada
[2]Associate Professor, School of Nursing, Faculty of Health Sciences, and Department of Psychiatry, Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada
[3]CIHR Doctoral Award, School of Nursing, Faculty of Health Sciences, University of Ottawa, Ottawa, ON, Canada
[4]Full Professor, Faculty of Health Sciences, University of Ottawa, Ottawa, ON, Canada

Abstract

No exit? Have we arrived at an impasse in the health sciences? Has the regime of 'evidence', coupled with corporate models of accountability and 'best-practices', led to an inexorable decline in innovation, scholarship, and actual health *care*? Would it be fair to speak of a 'methodological fundamentalism' from which there is no escape? In this article, we make an argument about intellectual integrity and good faith. We take this risk knowing full well that we do so in a hostile political climate in the health sciences, positioning ourselves against those who quietly but assiduously control the very terms by which the public faithfully understands 'integrity' and 'truth'. In doing so, we offer an honest critique of these definitions and of the systemic power that is reproduced and guarded by the gatekeepers of 'Good Science'.

Do you really believe that the sciences would ever have originated and grown if the way had not been prepared by magicians, alchemists, astrologers, and witches whose promises and pretensions first had to create a thirst, a hunger, a taste for *hidden* and *forbidden* powers?

Friedrich Nietzsche

Nothing can exist as an element of knowledge if, on the one hand, it does not conform to a set of rules and constraints characteristic, for example, of a given type of scientific discourse in a given period, and if, on the other hand, it does not possess the effects of coercion or simply the incentives peculiar to what is scientifically validated or simply rational or simply generally accepted . . .

Michel Foucault

Introduction

No exit? Have we arrived at an impasse in the health sciences? Has the regime of 'evidence', coupled with corporate models of accountability and 'best-practices', led to an inexorable decline in innovation, scholarship and actual health *care*? Would it be fair to speak of a 'methodological fundamentalism' [1,2], a totalising ideology, from which there is no escape?

Our title – 'No exit?' – is meant to conjure several spectres and to haunt certain corridors of the health sciences. First, it alludes unironically to existentialist philosophy, and shares its gravitas. The reader is invited to recall Jean-Paul Sartre's play by this name [3], along with his famous discussions on *mauvaise foi* or 'bad faith' [4]. In a nutshell, for Sartre, we are in 'bad faith' to the extent that we fail to exercise our freedom, to the extent that we prefer self-deception over responsible action. This article argues that, in the health sciences, clinicians and researchers who blindly adopt evidence-based practices are acting in bad faith. In other words, they fail to think or to act with intellectual integrity; they forsake scientific rigour and honest inquiry for the simple gratifications of ideology, greed, routinisation and efficiency. Like the 'faithful' practitioner of evidence-based medicine (EBM), the person who acts in bad faith does so on the basis of 'a peculiar type of evidence . . . *non-persuasive* evidence' [4]. On some level, he or she *knows* the truth, but chooses instead to turn from it and to adopt a posture of defence, often from a moralistic vantage. In this article, we claim that EBM persuades on faith, rather than on persuasive evidence; consequently, EBM remains impervious to persuasive evidence in order to remain faithful to its worldview. As Sartre would say, '[b]ad faith apprehends evidence but it is resigned in advance to not being fulfilled by this evidence, to not being persuaded and transformed into good faith' [4].

We thus propose a discussion on intellectual integrity and good faith. We take this risk knowing full well that we do so in a hostile

political climate in the health sciences, positioning ourselves against those who quietly but assiduously control the very terms by which the public faithfully understands 'integrity' and 'truth'. In doing so, we offer an honest critique of these definitions and of the systemic hidden and forbidden powers that are reproduced and guarded by the gatekeepers of 'Good Science'. Here, our title might best allude to Socrates, for whom 'no exit' is an indispensable philosophical concept. In good faith, and without epistemological hubris, Socrates famously argues that the *aporia* – the point of 'no exit' – marks the limits of scientific knowledge, and in marking these limits, properly stands as the beginning of true knowledge. Here, there is an ostensible paradox. When the scientist arrives at the limits of her or his knowledge, when he or she is intellectually at wit's end, and, crucially, when he or she *knows* that he or she has arrived at this rational impasse, then, Socrates says – and only then – can we say that we are in a position where true knowledge might begin. It is this paradoxical moment that defines the Socratic dictum concerning wisdom. I am wise when I can honestly say: 'I know that I know nothing!' At this moment, there is a rupture in my epistemological worldview, I look at the world in wonder, and, with some care, I might open onto another way of thinking or acting. Rather than continuing down the road to nowhere, wisdom calls for detours, new and different paths, a new vista on the same problem, a working – and thinking – through the *aporia*. Mere technicians, however skilled they may be, will not succeed in this endeavour; they are practitioners, not theorists. The *aporia* calls for thinking, for theory. This is all the more urgent in a world where technicity stands in for thought and *Google* searches stand in for knowledge [5].

Theory and practice

'Theory' comes from the Greek *theoria*, the meaning of which originally denotes something visual – a looking at, viewing, contemplation, speculation, a sight or spectacle. Today, we tend to distinguish 'theory' from 'practice' in the way we rigidly separate thinking from doing, the *vita contemplativa* from the *vita activa*. The history of this division is modern, and in our day, we might even say that a certain anti-intellectualism reigns, and that theory is denigrated while practice is celebrated.

But perhaps this is a false binary, even a dangerous one. In a published conversation from 1972, Michel Foucault and Gilles Deleuze ask how theory and practice are related, and in particular, what role the intellectual plays in theoretico-practical matters. Deleuze makes the following remark: 'a theory is always local and related to a limited field, and it is applied in another sphere, more or less distant from it' [6]. Here, theory is particular, not universal. Deleuze suggests that the effective use of theory entails what we might call a particular *misapplication* of sorts: theory must be put into practice in a sphere beyond the limits of its original scene, beyond its epistemological horizon. This activity requires wisdom in the Socratic sense: sight must become insight, and the intellectual is charged with bringing together two often disparate spheres of knowledge in the effort to see them in a new light. Often, this will entail a risk because it transgresses established epistemologies and the powers with which they are invested. Foucault responds to Deleuze: 'theory does not express, translate, or serve to apply practice: it is practice. But it is local and regional . . . , and not totalizing' [6].

We recently proposed this rationale [7] when we argued that a theoretical discussion on truth, power and political fascism might offer a valuable – and practical – lens through which to critique the evidence-based movement in the health sciences. Indeed, we wagered that our use of theory would be a *productive* misapplication of sorts, paying off by providing some insight into the hidden politics of the health sciences which, we argued, are held hostage to rigid evidence-based taxonomies and hierarchies like those promoted by the Cochrane Collaboration. We firmly believe that it is crucial to have cross-pollination between academic disciplines, between theory and practice. Too often we become mired in our own fields of research and so thoroughly indoctrinated by our working culture and 'best-practices' that we lose the capacity to honestly critique the popular methodologies of our own disciplines. And yet, unsurprisingly, we operate in bad faith because on some level, we *know* that real innovation often comes from the margins of a discipline. Sometimes a relative 'outsider' is best situated to offer new terms of understanding or a new methodological approach. This is because the outsider is not limited by the theoretico-practical terms that govern the insider's regime of knowledge; the outsider brings a different lexicon, novel explanatory terms and a fresh *modus operandi*. The outsider puts her or his theory into practice. As Deleuze famously remarks, here theory 'is exactly like a box of tools' (p. 208); the outsider (whom he also calls the 'nomad') sets to work to build something new, trespassing upon our familiar terrain and transgressing our traditional topologies.

Such theoretical interventions are not always greeted with open arms. The outsider is frequently perceived as a threatening interloper. This certainly has been our experience as we have been the target of a very strong reaction following the publication of two articles critically examining the evidence-based movement in health sciences [7,8]. Our work has been praised at times, e.g. Healy [9], although it has been mostly disparaged, e.g. Jefferson [10]. What is noteworthy is that while it engaged EBM by making an epistemological argument, the response to it has been overwhelmingly emotional and epistemologically vacuous. Also noteworthy is the fact that those who cited our work (e.g. Healy [9]) to sharpen their critical assessment of the evidence-based movement have themselves become the target of vicious attacks on blogs – usually from bloggers of an avowedly conservative political persuasion. Unfortunately, pro-EBM responses have mostly been reactionary and devoid of substance; they often consist in *ad hominem* attacks or vitriolic condemnations of our 'postmodern rubbish', and usually fail to demonstrate the most rudimentary acquaintance with the thinking of Derrida, Deleuze or Foucault. Had these advocates of EBM clearly explained why our theoretical approach was misguided or how our evidence did not support the main claim that there is a hidden politics of 'evidence' in the health sciences, then perhaps there could have been some fruitful dialogue.

Those who are so eager to dismiss the 'postmodern' position (which, incidentally, is not *one* movement or *one* point of view) are often those who accuse us of courting a dangerous relativism. Ironically, they do not see the inconsistency in their own position, which they falsely imagine to be absolute. In the words of Theodor Adorno, 'the postulates and values that surface wherever people imagine that they have to overcome relativism, are the products of arbitrary acts, things that are freely posited, that are created and

not natural, and thus they necessarily always succumb to the relativism they denounce' [11]. But these individuals must disavow, in bad faith, the contingency of their own position through dubious appeals to objectivity and authority, usually acting as if their position carried the Imprimatur of Science and Truth. We agree with Maya Goldenberg who asserts that '[t]he appeal to the authority of evidence that characterizes evidence-based practices does not *increase* objectivity but rather *obscures* the subjective elements that inescapably enter all forms of human inquiry' [12]. Thus, the problem with EBM is that, at best, it downplays, and at worst, it utterly disavows the subjective elements operating at the heart of its own system. Indeed, there is a growing body of literature that concurs, taking EBM to task on its claims to rigour and scientificity. To take one instance, Helen Lambert's excellent study argues that EBM represents:

> an indeterminate and malleable range of techniques and practices characterised not by particular kinds of methodological rigour, but by the pursuit of a new approach to medical knowledge and authority . . . within a contemporaneous political and economic climate of declining trust and growing accountability [13].

So, why have advocates and acolytes of EBM responded so forcefully to our critiques of EBM? The number and intensity of their responses make us suspect that we are really onto something, penetrating the recesses of hidden and forbidden powers. The substance of their responses (often emotional reactions on the part of individuals presenting themselves as the guardians of objectivity and neutrality) provides us with additional clues. To be sure, these responses demonstrate not only the power of the pro-EBM lobby, but also the shocking weakness (read absence) of many interlocutors' arguments when facing epistemological issues in research. The most negative reactions originated from Australia, Canada and the United Kingdom where Archie Cochrane's work is elevated to the rank of Truth. Our strategic use of Deleuze and Guattari's concept of *microfascism* was misinterpreted by some who even accused us of depicting Cochrane as an actual fascist [14]! Sadly, many individuals missed the point altogether. Sadder still is the vast institutional nexus that endorses such glib anti-intellectual commentary. In the public sphere, authors like Goldacre [14] are commissioned to wield the Imprimatur of Science and to provide newsworthy entertainment at the same time. While Goldacre is free to express his opinion, we must worry when it is anointed as Truth, circulated and publicly endorsed by an elite membership to feather their own nests. But bad faith is more than a flight from authentic science; it reaches further than individual columnists and bloggers whose sense of entitlement has come under threat. Some 'top-tier' journals are also guilty of misrepresenting and otherwise silencing the fierce debate over EBM in the health sciences domain. For instance, the *British Medical Journal* is known for its pro-EBM stance. In one instance, pro-EBM articles were extensively published in a special issue on EBM while critiques of EBM were 'relegated to the back of the BMJ and branded under the extraordinary heading *Personal View*' [15].

Rather than return to our earlier epistemological debate, here we are concerned with the politics and ethics of power in the health sciences. The pro-EBM stance capitalizes on the current climate of anti-intellectualism; it equates evidence with practice and truth while dismissing theory as irrelevant, if not downright trouble-

some because it meddles with 'a job well done'. But without theoretical intervention, this job is reduced to a routinised, quantifiable practice driven by utility, best-practices and reductive performance indicators. EBM becomes an ideologically driven practice that ignores the contexts of experience. The result, as Denzin, Lincoln and Giardina have suggested, 'turns subjects into numbers' and 'turns social inquiry into the handmaiden of a technocratic, globalizing managerialism' [16]. More than this, as we saw above, these practices become systemic and ideological, endorsed and circulated by a powerful cadre of 'experts' whose vested interests are frequently hidden from sight. According to Foucault, it is precisely this power that theory seeks to interrupt: for him, theory is 'a struggle against power, a struggle aimed at revealing and undermining power where it is most invisible and insidious' [6].

Scientific evidence and Enlightenment

Historically, it was modern science that led humanity out of the dark grip of power, away from the blind and pious obedience demanded by the Church/State. In 1784, the philosopher Immanuel Kant characterized the scientific Enlightenment as an *Ausgang* – a 'way out', an exit from our immaturity or 'minority' status: '*Enlightenment is the human being's emergence from his self-incurred minority. Minority* is inability to make use of one's own understanding without direction from another' [17]. The Enlightenment motto, *sapere aude!*, is fitting, and ought to be read as a scientific injunction: 'dare to know', 'have the courage, the audacity, to know!' We would not be mistaken to link this courage to integrity, and all the more because the greater part of humanity has, Kant marvels, 'grown fond' of this tutelage. Humanity must renounce its intellectual and moral dependency, and instead embrace its reason: we must not subject ourselves to any authority; we must think for ourselves.

Sadly, this ideal is all too rare within today's scientific enterprise. In fact, we would argue that Kant's Enlightenment values have been turned upside down. Many spheres of science – the health sciences among them – operate with the same authority and power that Kant sought to shake off. Rather than promising an 'exit' or escape from our tutelage and slavery, as Kant originally imagined, today's sciences offer us 'no exit' from their paternalistic programme. A science that was once revolutionary and emancipatory has ossified over the centuries – historically, not only in the direction of positivism, but also through the rise of the modern state, and through the techniques whereby states and populations are governed. Today we have a mind-boggling nexus that Foucault calls 'state science' [18]: an ethic of industry that informs our ideological state apparatuses, a tangled web that includes Big Pharma; innumerable government lobbies; academia and its research sponsors; the convergence of research and business with multiple 'stakeholders', both public and private; paradigms rewarding the 'bioentrepreneurship' of biotech companies; service industries from the human genome sciences to multinational pharmaceutical and agribusiness complexes; corporate models from the ground up, including accountability practices and an obsession with quantification; the legal-juridical complex; and the insurance industry. This list is by no means exhaustive. But it offers some insight into what human reason is up against today if it is to shake off its tutelage: each of us will need bold

courage and audacity to claw our way back from this worldview and its suffocating effects. We no longer learn to think critically. Instead, we are trained as worker-technicians with 'transferable skills'; we must be obedient to the logic and ethic of the global market. 'Precepts and formulas', Kant argues, 'those mechanical instruments of a rational use, or rather misuse, of his natural endowments, are the ball and chain of an everlasting minority' [17]. Today, the State Scientific Complex itself has become this ball and chain – a form of rationality that has the potential to enslave, rather than to liberate. In Foucault's words, it is this 'rationalization which can be said to characterize not only Western thought and science since the 16th century, but also social relationships, state organizations, economic practices and perhaps even individual behaviors' [18].

How, then, can we speak of integrity as in individual behaviour? And given this matrix of power, what is left of the value-free objectivity that was held up as a scientific beacon in the night? 'Evidence', we learn, is far from neutral; 'truth' and 'evidence' are always overdetermined by the social, historical and political contexts that lend them their currency and power. These inform our methodologies, and we know that these methodologies, in turn, directly and indirectly shape the object of inquiry. For example, does my evidence '*X*' support the theory of global warming or tend to refute it? The answer sometimes depends on where I live and who signs my paycheque. In the extreme, evidence is 'fixed', and it is made to fit our procrustean policies. For example, Denzin, Lincoln and Giardina describe the US situation in the following way: 'Under the Bush regime, a fact or piece of evidence is true if it meets three criteria: (a) it has the appearance of being factual; (b) it is patriotic; and (c) it supports a political action that advances the White House's far-right neoconservative agenda' [16]. The point here is that evidence is not neutral, and it cannot be extracted from texts and 'synthesised' into a (Cochrane) Systematic Review; instead, it calls for vigilant analysis and interpretation. As MacLure has argued:

> systematic review systematically degrades the central acts of reviewing: namely *reading* and *writing*, and the unreliable intellectual acts that these support, such as interpretation, argument and analysis. By replacing reading and writing with an alternate lexicon of scanning, screening, mapping, data-extraction and synthesis, systematic review tries to transform reading and writing into accountable acts [19].

Conclusion: the ethics of critique

If there is any hope for integrity, if there is any exit, perhaps Kant's concept of 'critique' can offer us a clue and Foucault can make this project relevant for us today. By critique, we mean something which is irreducible to 'fault-finding' or 'judgement' [20]. Rather, critique can be understood in the context of Kant's critical philosophy: a reflection on the conditions of possibility for knowledge and truth, pointing to the conditions of the legitimate use of our faculty of reason. How far should my reason extend? What should be the 'reasonable' limits of my use of reason? Critical inquiry is therefore more fundamental than scientific inquiry, more originary, as philosophers would say. With the practice of critique, we are:

> not attempting to find out what is true or false, founded or unfounded, real or illusory, scientific or ideological, legitimate or abusive. What we are trying to find out is what are the links, what are the connections that can be identified between mechanisms of coercion and elements of knowledge, what is the interplay of relay and support developed between them, such that a given element of knowledge takes on the effects of power in a given system where it is allocated to a true, probable, uncertain or false element, such that a procedure of coercion acquires the very form and justifications of a rational, calculated, technically efficient element . . . [18].

Critique is therefore a set of relays between theory and practice, an unearthing of the vicissitudes of power/knowledge. The point of critique is not to render a judgement, but rather, to inquire into the conditions under which judgement could proceed – which is to say, the normative conditions of judgement, the evaluative scaffolding, that which ends up determining in advance the true from the false, and, correlatively, good from evil.

This returns us to the subject of knowledge, to the individual practitioner/researcher who is at once – wittingly or unwittingly – a subject of power, charged with safeguarding the True and the Good. But the practicable application of knowledge will always be in bad faith to the extent that the practitioner does not avow the political and ethical dimensions of his or her own power/knowledge. This self-avowal is an ethical matter. For Foucault, ethics is the relationship that one has with oneself – a relationship that is intertwined with our relationships to things in the world and to others: 'three axes whose interconnections have to be analysed: the axis of knowledge, the axis of power, the axis of ethics' [18]. These axes are interconnected because there is no 'power' in the abstract; power is not a thing that one wields, but it is better understood as a relation. Likewise with knowledge; I do not 'possess' a piece of knowledge in the abstract, but knowledge is always tied to a power-relation, it is always one relay in a set of practises. Lastly, and similarly, it would be a mistake to understand the subject – the self – as wholly autonomous, abstract and free from these multiplex power/knowledge(s). It is all the more pressing, then, to critique the limits of our knowledge and its applicability, to critique what gets taken for 'true' at a given moment of our history, and why.

Who, then, is the subject who speaks the truth? In whose name and by what authority does he or she pronounce the *value* and *truth* (so often conflated) of one piece of evidence over another? If she or he acts ethically and in good faith, the subject's self-relation must be agonistic, an 'ethic of discomfort', a struggle to lay bare those multiple contingencies – from Big Pharma to the insurance industry – that work together to inform both who we are as subjects of power/knowledge and what we will come to accept as 'self-evidently' true or false. To live and work in our postmodern moment is to be constituted in and through these complex forces. We can choose to deny this, and to live in bad faith, or we can accept it as the most fundamental ethical challenge of our time. Integrity is an ongoing struggle in humility and the limits of knowledge.

Integrity involves 'truly and profoundly questioning this relationship between rationalization and power' [18]. We must dare to ask: 'how is it that rationalization leads to the furor of power?' [18]. We must acknowledge the coercive dimensions – the madness or furor – of 'scientific rationality', 'the effects of constraint linked to its institutionalization and the constitution of [scientific] models' [18]. The role of criticism is not merely historical; its

urgency is in the present. Not only must we ask how things became what they are, but we must look for breaking points, to prise open this discourse in a spirit of revolt, and to work to imagine how things might be other than what they are at present.

In conclusion, we point again to Foucault, who writes: 'There is here a whole ethics of tireless evidence that does not exclude a rigorous economy of the True and the False; but is not reduced to it, either' [18]. In the simplest terms, Foucault warns against the reductionism of an approach like that of EBM. Of course, none of this is to deny the relative value of evidence, but we must be wise: we must have the wisdom to know when, and how, evidence should apply. Practice without theory is blind. And yet, there is another message in this text.

We are meant to slow down and reflect when we read Foucault's ironic words – 'a whole ethics of tireless evidence'! Significantly, Foucault *personifies* evidence as 'tireless', as if evidence could act, as if it had a sleepless agency, as if the evidence itself stood watch, vigilant, ready to catch us unaware, to turn *us* into an object of *its* knowledge. This, we would argue, is the way that EBM characterizes 'evidence': as if science herself were neutral and only faithfully reported the ever-truthful testimony of evidence! They are facts, we are told: they tirelessly speak for themselves! So, on the surface, EBM advocates and acolytes will argue that there is an 'ethics of evidence', where evidence is no more than a descriptive term. But beneath the surface, evidence is also a normative term for EBM, a term that embodies not just what is supposedly objectively 'true' but also what is 'good' and demands our dutiful obedience.

When facts are made to speak in the name of 'tireless evidence' and Truth, and when they speak in the place of men and women whose interpretations and commitments become hidden from view, then two things will result. First, unsurprisingly, 'the facts' will end up speaking the silent language of an elite whose voice is now naturalized, realized and located in the things themselves. In this way, the elite effectively indemnify themselves against critique, because the 'truth' of their position is displaced into the world of 'evidence', and as such, becomes untouchably factic – it is the 'ethics of evidence', after all, a Natural Law, and not the ethics of fallible man. Second, those who 'dare to know' – *sapere aude!* – and who have the audacity to wage a critique and to speak out will be subject to moral castigation, and to the swift but shallow justice of the latest blog or Op-Ed column. In the face of unfounded professional and institutional scrutiny, then, we can hold fast to an ethics of integrity; in our practise of critique, we shall continue to transgress the diktats of State Science.

Acknowledgements

References

1. House, E. R. (2003) Bush's neo-fundamentalism and the new politics of evaluation. *Studies in Educational Policy and Educational Philosophy*, 2. http://www.upi.artisan.se/docs/doc187.pdf (accessed 4 December 2006).

2. House, E. R. (2006) Methodological fundamentalism and the quest for control (s). In Qualitative Inquiry and the Conservative Challenge, 3rd edn (eds N. K. Denzin & M. D. Giardina), pp. 93–108. Walnut Creek, CA: Left Coast Press.

3. Sartre, J.-P. (1989) No Exit and Three Other Plays. New York: Vintage Books.

4. Sartre, J.-P. (2000) Essays in Existentialism. New York: Citadel Press.

5. Tang, H. & Ng, J. H. K. (2006) Googling for a diagnosis – use of Google as a diagnostic aid: internet based study. *British Medical Journal*, 333 (7579), 1143–1145.

6. Foucault, M. (1977) Intellectuals and power: a conversation between Michel Foucault and Gilles Deleuze. In Language, Counter-Memory, Practice: Selected Essays and Interviews (ed. D. F. Bouchard), pp. 205–217. Ithaca, NY: Cornell University Press.

7. Holmes, D., Murray, S. J., Perron, A. & Rail, G. (2006) Deconstructing the evidence-based discourse in health sciences: truth, power, and fascism. *International Journal of Evidence-Based Healthcare*, 4 (3), 180–186.

8. Holmes, D., Perron, A. & O'Byrne, P. (2006) Evidence, virulence, and the disappearance of nursing knowledge: a critique of the evidence-based dogma. *Worldviews on Evidence-Based Nursing*, 3 (3), 95–102.

9. Healy, B. (2006) Who Says What's Best? *US News and World Report*, 3 September. http://www.usnews.com/usnews/health/articles/060903/11healy.htm (accessed 28 June 2007).

10. Jefferson, T. (2006) How to grab a headline: lots of smoke and little meat (response to Holmes *et al.*). *International Journal of Evidence-Based Healthcare*, 4 (3), 392–393.

11. Adorno, T. W. (2001) Problems of Moral Philosophy. Stanford, CA: Stanford University Press.

12. Goldenberg, M. J. (2006) On evidence and evidence-based medicine: lessons from the philosophy of science. *Social Science and Medicine*, 62, 2621–2632.

13. Lambert, H. (2006) Accounting for EBM: notions of evidence in medicine. *Social Science and Medicine*, 62, 2633–2645.

14. Goldacre B. (2006) Objectional 'objectives'. *The Guardian*, 19 August. http://www.guardian.co.uk/life/badscience/story/0,,1853711,00.html (accessed 28 June 2007).

15. Miles, A. & Loughlin, M. (2006) Continuing the evidence-based health care debate in 2006: the progress and price of EBM. *Journal of Evaluation in Clinical Practice*, 12 (4), 385–398.

16. Denzin, N. K., Lincoln, Y. S. & Giardina, M. D. (2006) Disciplining qualitative research. *International Journal of Qualitative Studies in Education*, 19 (6), 769–782.

17. Kant, I. (1996) An answer to the question: what is enlightenment? In Practical Philosophy (ed. M. J. Gregor), pp. 15–22. Cambridge: Cambridge University Press.

18. Foucault, M. (1997) The Politics of Truth. New York: Semiotext(e).

19. MacLure, M. (2005) 'Clarity bordering on stupidity': where's the quality in systematic review? *Journal of Education Policy*, 20 (4), 393–416.

20. Williams, R. (1976) Keywords. New York: Oxford University Press.