Incommensurability and Educational Research

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Chris Hanks in "Incommensurability, Interpretation, and Educational Research" has written an admirably clear account of the incommensurability issue and the muddling role it plays in philosophy of science and educational research. He believes that it has confounded logical empiricists and traditional critical realists and has helped spawn a variety of postmodernisms that revel in forms of pernicious relativisms. In educational research, he holds it responsible (implicitly at least) for launching the "objectivity vs. subjectivity" debate that seems to underlie the so-called "quantitative vs. qualitative methods" dispute, which he suggests ultimately are more matters of people talking past one another while stuck within their own shabby epistemological homes.

While there is much that I can agree with in Hanks's account, I believe that part of his solution to the incommensurability issue has muddled the matter further. So, I shall summarize his argument and lay out why his preferred solution in part makes things worse, rather than better. Next, I shall point to why the incommensurability issue is a hollow philosophical "side-show" that has created a lot of mischief in accounting for progress in science and inquiry. I shall end with some comments on how this mischief has infected educational research and how we can extricate ourselves from the specious spectacle of incommensurability.

Hanks's Account

Hanks is correct that in contemporary philosophy the issue of incommensurability arises from the work of W.V.O. Quine, Donald Davidson, and Thomas Kuhn (though I think that he is wrong about Wittgenstein). Kuhn's *The Structure of Scientific Revolutions* and the earlier (but not the latest) work of Richard Rorty on the alleged import of incommensurability have been especially influential in education.[1] The issue initially arose out of the debate among historians and philosophers of scientific change who were either taken with the "cumulative" nature of scientific change (science as continuously building up a single edifice of knowledge) and those who were taken with the "revolutionary" nature of scientific change (continuous successions of building up and then tearing down the walls of knowledge). The champions of the revolutionary view came to see that the history of science is but a series of divergent world views — "we may want to say that after a revolution scientists are responding to a different world" — such that rational choice can never be made between them.[2] As Hanks correctly notes, Quine in his systematic view of the "web of belief" saw the implications of this for *meaning* and *belief*. For if each term in a scientific theory receives its meaning from other terms in the theory, then not only do scientific theories confront their evidence "holistically," but also different theories, because each defines its own terms, cannot even be compared. They are "incommensurable." Moreover, it also follows that "observational reports" — the basic data that verificationist or falsificationist empiricists

of all stripes take to be the tests of theory acceptance are themselves incommensurable. Since they are given meaning by their respective theories, they, too, are theory-infected. There are no theory-neutral data. It is only a step to the pessimistic conclusion that the rationality and progressiveness of science are myths. If theory choice and acceptance is arbitrary and capricious (depending on which one has the most adherents or the skillful rhetoricians), science becomes an irrational endeavor.

Hanks points to the reactions by John Searle and Richard Rorty who he takes to accept the incommensurability thesis. Searle, who is clearly a foundationalist, resists its implications by claiming that though the arbitrary acceptance of conceptual schemes is true, it does not mean that they cannot also correspond with external reality, indeed that culturally-embedded conceptual schemes must presuppose an external reality. Rorty, on the other hand, accepts incommensurability, and simply retreats to the anti-realism of solidarity with fellow adherents in recognition that the gulf between opposing conceptual schemes cannot be bridged.

Hanks insists that by noticing a key insight and a key defect in both Searle and Rorty, as representative of two general orientations to incommensurability, we can overcome these disagreements. He points to Searle's insight of a shared background of practice between adherents of dueling conceptual schemes, while impeaching Searle for assuming that we can get past that shared practice and language to external reality itself. And while Rorty correctly infers that we cannot draw any inferences from human thought to external reality, Hanks believes that Rorty fails to understand that his agreement on the "presumption of shared experience is present in all communicative encounters, not just among those who can already claim a degree of 'solidarity'" defuses the incommensurability problem.

Hanks's final move to rapprochement is to invoke the resources of the hermeneutic tradition to bridge the gulf between dueling conceptual schemes. Through interpretation, we may come to an understanding of the other. And while he is intrigued by the hermeneutics of Charles Taylor and Hans-Georg Gadamer, "it is not clear that it takes incommensurability seriously enough. Doing so must involve the recognition that sometimes reconciliation is not possible." Indeed, he points out that "Davidson illustrates that the indeterminacy of translation operates for individuals within 'shared frameworks' just as it does between unfamiliar schemes." And finally he asserts, "A striking consequence of this line of thought is that it undermines the concept of indeterminacy itself. Once we have escaped from the notion of fixed conceptual frameworks existing outside of human communication and social practice, the idea that those frameworks might be incompatible in fundamental ways loses its force."

An Odd Argument?

While I am an old fan of hermeneutical approaches, I have great difficulty in understanding just how Hanks avoids succumbing to the trap of incommensurability.[3] Indeed, given his labors to point out how serious the incommensurability issue is for science and educational research, and his assertion that interpretive studies by Taylor and Gadamer underestimate the problem, it is surprising that he thinks that Davidson's position that incommensurability applies as well at the individual level

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somehow "undermines the force" of incommensurability. Exactly the opposite should be expected, since no one — not even the most recalcitrant logical positivist — would argue that science is not a "form of human communication and social practice." Unless Hanks can give us a positive argument, we only have sheer assertion here. And without that, we have nothing but a compounded muddle.

Avoiding the Trap

Incommensurability is simply a snare best avoided from the outset. It is a beguiling view only if we follow the champions of the revolutionary perspective on science. While the picture presented by the cumulative school of science cannot be sustained either, it simply does not follow that we are forced to march with the revolutionaries into the trap of incommensurability from which there is no easy escape. For one, Larry Laudan some time ago has shown us how to avoid the false dichotomy of either cumulative or revolutionary with his close attention to the actual historical record of science.[4] To the contrary, Laudan shows how an emphasis on problems common to competing "research traditions" can reveal the progressive nature and rationality of science in a way that foundationalist, critical realist, and "post-positivistic" accounts cannot. Though compatible with a realist construal of science, the main import here is on the problem solving effectiveness of theories and their research traditions and the importance of the problems they confront (and if successful solve) in constant competition with other views. Rational theory and research tradition choice are simply based on the relative success of problem solving for the problems that are common to a research domain. So even if it is true that the meaning of terms and "observation reports" are determined in part by higher level theoretical and metaphysical beliefs, the common problems of a research domain can be stated in a way that is sufficiently neutral to competing theories and research traditions and the effectiveness of their problem solving capability can be compared. Such a view also dispenses with other false dichotomies such as the "conceptual vs. empirical" and "descriptive vs. normative" divides, so these philosophical gains are equally preserved.

Educational Research

The fortunes for educational research follow. Such a view also undercuts the either/ors of "objectivity vs. subjectivity" and "quantitative vs. qualitative" that have plagued educational research. It shows how methodological and theory competition in both quantitative and qualitative research (intra and inter) are possible and desirable, while establishing a basis for commensurability. As well, it frees us from the shackles of thinking that quantitative studies must be based on "positivist," reductionist assumptions, while qualitative studies, in contrast, are "holistic, process-oriented, fluid, creative, interpretive, expansionist, and grounded." In freedom from this, there is much to gain.

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1. Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962); Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979); and Richard Rorty, *Contingency, Irony, and Solidarity* (Cambridge: Cambridge University Press, 1989). Rorty's recent work, *Truth and Progress* (Cambridge: Cambridge University Press, 1998), turns away from postmodernist sins.

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2. Kuhn, *The Structure of Scientific Revolutions*.

3. See David Ericson and Frederick Ellett, "Interpretation, Understanding, and Educational Research," *Teachers College Record* 83, no. 4 (1982).

4. Larry Laudan, *Progress and Its Problems: Toward a Theory of Scientific Growth* (Berkeley: University of California Press, 1977).

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