The structure of educational research

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Educational research is widely construed as the scientific investigation of the causes of ‘effective’ teaching. Discussion of values and philosophical problems is condemned as descent into ‘ideology’. Opposing this is a conception of teaching as *phronesis* where educational research and philosophy may be desirable, but have no direct relationship to practice. It is contended in this article that both of these views are misconceived. In educational research, empirical questions are secondary, values are central, and philosophical investigation is central to the determination of these. Philosophy, not social science, directly governs policy and practice; virtue governed by logic, not causation under natural law, is the principal explanatory concept. Educational research, then, is logically tied to practice. This sanctions not the authoritarian ‘methods that work’ project, but a pluralistic conception of research anchored in the autonomy of teachers and pupils.

‘Educational research’

*The technicist ascendancy*

Teaching today is treated as a technology—an applied social science (Bennett & Desforges, 1985; Bassey, 1995; Mortimore & Sammons, 1997, p.175). There are repeated calls for it to be ‘evidenced based’ (Hargreaves, 1994, pp.44–47, 1996, 1997; Davies, 1999. See also the debate on Hargreaves’s views with replies in Research Intelligence, no. 57, 1996 to no. 59, 1997)—it is said to need a ‘known-to-be-valid’ knowledge base which can act as a foundation for teaching’ (Reynolds, 1995, p.59; see also Reynolds & Cuttance, 1992; Sammons et al., 1995; Teacher Training Agency, 1996; Mortimore, 1998a, p.134). At the heart of this quest, both to increase teachers’ reliability and to provide a rationale for their training, is a search for what *causes* people to become educated. This accords exactly with the then Secretary of State for Education’s prescription for ‘genuine social science’: ‘to be able to measure the size of the effect of A on B’ (Blunkett, 2000, para. 56).

It should in fairness be stated immediately that some at least of the leading advocates of school effectiveness research (SER) warn against ‘interpreting..."
correlations as evidence of causal mechanisms’ (Sammons et al., 1995, p. 1; Sammons, 1999, pp. 184, 187). In practice, however, there are ‘effects’ everywhere, together with ‘impacts’, ‘promotions’, ‘mechanisms of effectiveness’, ‘major determinants’, ‘implicit causal chains’, ‘correlates/causes of “effectiveness”’, ‘causal connections’, ‘causal chains and mechanisms’, ‘causal determinants of educational achievement’, ‘possible underlying explanatory mechanisms’, a ‘causal model of educational attainment’ and so on (Sammons et al., 1995; Sammons, 1999, seriatim). These scruples, in any case, are not about ‘causation’ as such in this context, but a warning about assuming mere linear causality—there is the additional possibility of ‘multivariate’, ‘reciprocal’ and ‘intermediate’ causation (Sammons et al., 1995, p. 1). The Office for Standards in Education (Ofsted), however, (who asked originally what the causes are) do subscribe to a linear model of causality (Sammons et al., 1995, p. 1).

Goldstein, the statistical leading light of SER, faithful to its avowed ‘positivist ontological and epistemological assumptions’ (Sammons, 1999, p. 1), certainly has no scruples about ‘causal mechanisms’, or deriving ‘generalisations’ from them (1995, pp. 11ff.) He conceives of SER as on a par with epidemiology and, with Mortimore (1998a, pp. 242ff.) and Sammons (1999, p. 233), looks forward to the day when ‘a comprehensive educational effectiveness theory’ can be established. An ‘input-process-output model’ is proposed to ‘illuminate the black box of how school and classroom experiences combine to foster or inhibit students’ progress …’ (Sammons, 1999, p. 149. For an example, see Goldstein, 1998, pp. 7ff.). Indeed, Goldstein claims that without ‘attempts to establish causality … we would then be left without any substantive explanations’ (1987, p. 6). It is also hoped to provide ‘major levers of current government policy in the UK’ and ‘use research results to influence practice’ (Sammons, 1999, p. X), which would have to involve findings that license reliable subjunctive and counter-factual conditionals. We know from all this, then, that it is the Humean concept of causation that is intended, where the relationship to the effect is entirely contingent.

The overall message, however, is very much more mixed than this. Proponents of SER do not like being thought of as ‘deterministic about “What Works” in education’ (Sammons et al., 1995, p. 7) and the findings are not to be applied ‘mechanically’ (Sammons, 1999, p. 1). Furthermore, they insist that findings are not to be regarded as prescriptive (or at least not in a ‘simplistic’, ‘recipe’ or ‘blueprint’ way—Sammons & Reynolds, 1997, p. 129; Sammons, et al., 1995, p. 2), yet they do see themselves as offering ‘a guide as to the most influential factors and the way action in one area can affect other areas and thus can be used to select specific foci for the initial phases of an improvement initiative …’ (Sammons, 1999, p. 232).

There are also much more serious signs of a logical salad. While SER, with the acknowledged ‘positivist’ background so far outlined, is unequivocally quantitative, it also apparently sees itself as mixing in qualitative approaches as if the two were complementary (Sammons & Reynolds, 1997, p. 128). But the latter, deriving from Husserl and Weber through Schutz (Bernstein, 1976, pp. 126ff.), was devised in
philosophical opposition to the then dominant positivism, and they remain deeply conflicting metaphysically, however distant these origins may seem. Again, they concede that ‘in many ways every school is unique’, shaped by things like the quality of the staff, rules and norms of behaviour (Sammons et al., 1995, p. 7), ‘how teachers conceptualise (and theorise) their educational worlds’ (Sammons & Reynolds, 1997, p. 133). But if the reasons that certain schools succeed is that they are striving to satisfy the ‘norms’ (i.e. the values) internal to the project, or to arrive at the most appropriate conceptualisation, those reasons are not also to be found in the external, inductively derived, comprehensive, nomological theory of social scientists.

Investigators of this persuasion appear here to be impaled on a ‘Kantian antinomy’ where two apparently indispensable but mutually exclusive explanations both apply to the same range of phenomena. On the one hand, we have the presumed universality of the applicability of mechanistic explanation that goes with the positivistic framework. But on the other, there is the ‘preposterous’ implication of the eventual total dispensability of explanations of human action in terms of purposive agency and moral responsibility (Taylor, 1985a, pp. 164, 169. See also Ryan, 1970, pp. 120ff.; Berlin, 1999a, pp. 188–189, 1999b), and this the proponents of SER seem to find morally unacceptable.

In the quest to place educational research on a firm scientific, ‘ideology’-free footing, and to remedy what is seen as its chronic other-worldly drift, there is a movement explicitly (Reynolds, 1998; Sammons, 1999, p. 232) to suppress essential components of the educational enterprise—debate about alternative values and the consideration of conceptual questions, and how answers to such questions affect, or ought to affect, what practical people do. Along with this, the suspicion has been felt (Times Higher Education Supplement, Leader, 2000) that the much-queried ‘relevance’ of research is going to be determined by what is seen to sub-serve the purposes of the current political regime. These developments are perhaps unsurprising when one notes that there is actually a high-profile tradition amongst philosophers (Peters, 1966, p. 15; Scheffler, 1973, p. 19; Hirst, 1983, p. 6) recently announced as established fact requiring no justification (Hirst, 1993, pp. 193, 195; Dunne, 1993, p. 369; McLaughlin, 1999, p. 13; Pring, 1999, pp. 305, 306; Smith, 2002, p. 675), that the conclusions of philosophy of education can have no logically direct bearing upon practical matters. (But see Pring, 2000b, pp. 127ff. for the contradictory view.)

The ‘phronetic’ response

Techne and Phronesis are for Aristotle contradictionarys within the practical (Dunne, 1993, pp. 237, 245, 314). Understandably, then, philosophers with a prior preference for his approach, who have rejected the first as a characterisation of teaching, because it is entailed, have settled with only illustrative argument for the second (Dunne, 1993; Carr, 1997, 2001; Smith, 1999). I wish to indicate why, at least as it is being currently characterised, phronesis will not perform the role into
which it is being pressed, and so cannot be the second—why it is a conceptual dead-end and institutional suicide note.⁵

First, *phronesis* is concerned with acting not making: ‘The mark of a man of practical wisdom [is] to be able to deliberate well about what is good and expedient for himself … about what sorts of things conduce to the good life in general’ (Aristotle, 1972, VI, 5, 1140b6)—a *phronimos* ‘knows how to live well’ (Dunne, 1993, p. 244). As a consequence, then, *phronesis* does not fit into an instrumentalist mould’ (Dunne, 1993, p. 267). ‘It may have no separately identifiable outcome behind it and … is realised in the very doing of the activity itself’ (Dunne, 1993, p. 244). But teaching does have an at least apparently ‘instrumentalist’, ‘separately identifiable outcome’—the increased state of understanding of the pupil. It may well be that this cannot be secured by efficient causality (*techne*, science), but teachers content with merely ‘living well’, i.e. with moral self-monitoring (however expansive the account we give of it) will not do it either.

Second, *phronesis* is a second-level operation—‘reflectiveness’ (Dunne, 1993, p. 369). While teachers qua *phronimoi*, then, can reflect upon, for example, be told about, be attentive, sensitive, etc. to, empirical propositions (as in, for example, Smith, 1999, pp. 330ff.), they cannot verify them—a first-level and logically prior operation (Clark, 2001, pp. 85ff.). These two levels are quite systematically conflated and so obscured in the literature (e.g. Carr & Kemmis, 1986, pp. 161ff.; Elliott, 1991, chs 4, 5, 6; Dunne, 1993, pp. 290ff.; 1999, p. 60; Smith, 1999, pp. 330ff.), thus sustaining the impression that teacher/*phronimoi* are fact-gathering in the classroom. They cannot be. The essential empirical dimension of educational research is closed to them.

The philosophical dimension of educational research is, of course, available from the second level, but this is in general either not mentioned (Carr & Kemmis, 1986), mentioned only in passing, (Elliott, 1987, p. 162, 1991, p. 51) or declined altogether (Dunne, 1993, p. 369. But see Carr, 2001, p. 475 for the contradictory declaration from the same starting point). It is difficult, then, to see how teaching qua *phronesis* can yield any concept of educational research at all. Furthermore, if teacher training courses are to be supplemented by all kinds of general arts subjects ‘to contribute to the development of this [phronetic] disposition’ (Dunne, 1993, p. 369; see also Carr, 1997, sect. 5; 2001, p. 473), if trainees are merely to be provide with ‘education about education’ with no necessary practice-specific reference (Carr, 1992, p. 13, original emphasis), then what precisely is the difference in teaching competence between such educands and all other well-disposed graduates of equivalent standard? Educational research and training have become entirely otiose.

The neglect of philosophy within this standpoint leads to a third query. How do Dunne’s *phronimoi*/mentors, for example, decide on ‘the nature of teaching as a practice’ or know where to steer apprentice teachers (Dunne, 1993, p. 369)? Elliott claims that ‘improvement of practice consists of realising those values which constitute its ends’ (1991, p. 49). But the values are said to be not capable of prior specification and to be a matter of personal judgement in particular circumstances’ (1991, loc. cit. *Any* personal judgement, e.g. Hitler’s? See Dunne, 1993, p. 369 for a
similar account). While the centrality of values is in this view acknowledged, how without philosophy are we to know what they are?

It is the aim of this article to show that educational research is involved only peripherally with the social sciences, and the quest for scientifically-proven knowledge of ‘what works’ is either incoherent, or at best reflects the attempted ascendency of a particular unstated and undefended ideology. On the other hand, contra the long-established traditions of the university sector, it is the sole business of educational research as such (and especially its philosophical component) to establish how teachers can educate more effectively, and the results should, of course, feed back directly into teacher training.

**Education as a value domain**

Education is centrally concerned with the development of the understanding. This understanding at least in substantial part is constituted of such disciplines as history, mathematics, science, and so on. These are practices in MacIntyre’s sense (1985, p. 187). Each has a set of rival philosophical characterisations—what they are taken essentially to be—and it is the internal values or goods in each characterisation that vary. For example, there are rival characterisations of science—inductivism, falsificationism and science as theoretical structures or paradigms—with rationalist/objectivist and relativist/consensual interpretations of programmes.

Exactly parallel rival characterisations could be set out of English, mathematics, history, geography, religion, the arts, morality. There are formalist, expressivist, symbolic, etc. views of the arts; explanations in history in terms of ‘covering laws’ versus the reasons of historical agents; logicist, intuitionist, formalist views of mathematics, and so on. There are also rival moral characterisations of the manner in which education is conducted. The ‘traditional’ and ‘child-centred’ views of education are properly to be seen in this way, and not as rival empirical hypotheses about the most effective way to teach. Here, again, we have two conflicting value systems, both claiming to be the proper way to conduct the education of young children, and both being applied to an empirically identical social situation (Clark, 1998; Carr, 1992, 2001, p. 467). Finally, it has been plausibly argued that ‘education’ itself is ‘essentially contested’—that there are at least several if not indefinitely many concepts competing for support here, which cannot be eliminated in favour of the ‘real’ one (Hartnett & Naish, 1976, vol. 1, pp. 74–92). Arriving at reasoned standpoints on these kinds of disputes is an indispensable part of educational research, since different versions of what each is will yield different versions of what education in it is. Furthermore, as I will later show, the version adopted by the teacher should then lead to the distinctive teaching methodology that it implies.

As frequently noted (e.g. Carr & Kemmis, 1986, pp. 108ff.; Carr, 1992, 1997, sect. 3, 2001, sect. 4), ‘education’, then, denotes a moral/normative not a psychological/empirical/causeal order. As a consequence, educational values such as those above are supervenient upon empirical social and psychological facts. I can see
education where you do not (if, say, I am a progressive and you are a traditionalist, or if I take a different view from you on the characterisation of the subject being taught), even though we agree entirely on the social facts before us. I will see education if the social phenomena which I observe satisfy my values. If they do not, I will see only the social phenomena. So, to be able to ‘see’ education in any situation, one must actually subscribe to some set of values constitutive of education, i.e. be of a progressive or traditional inclination, and consciously or unconsciously be working with some particular conception of the subject–matter.

Education, then, is not an ‘aspect of the world’ about which a ‘body of knowledge’ needs to be accumulated by ‘scientific enquiry’, prior to the consideration of any ‘application’ (Hammersley, 2002, pp. 115, 123), with the consideration of values apparently beyond the scope of educational research altogether (Hammersley, 2002, p. 149). As already noted, the quantitative and qualitative approaches have, in recent history, had two roots—the ‘positivist’ or ‘scientific’, and the ‘phenomenological’ or ‘manifest’ (Bernstein, 1976, pp. 117ff.) Both of these approaches to social science have as a declared central tenet the claim that they are wertfrei—‘their primary goal is to obtain organised knowledge of social reality’ (Bernstein, 1976, p. 136). Since, then, social science in both its variants studies only the phenomena, i.e. is in its different ways exclusively empirical, it cannot be studying education, at least not yet—no empirical survey, however minute, can alone determine which of its findings are educational.

It cannot then be the case that ‘SER by its very [empirical] nature sets out to identify the components of good practice’ (Sammons et al., 1995, p. 25). Such a conclusion must be the result of the application of prior standards that enable these ‘components’ to be identified as such: ‘School inspection [necessarily] involves the making (and justification) of qualitative judgements’ (Richards, 2001, p. 656). When ‘good’ practice is regularly said to be ‘found’ by authorities (as in Department of Education and Science, 1977), we have, then, a closet declaration de haut en bas that something is henceforth to be regarded as good, not (contra Woodhead, 1999) evidence that these authorities have better eyesight than the rest of us. Similarly, it is mere fantasy to propose, aside from the assumed hegemony of some set of values or other, that we assemble for ‘higher R&D productivity’ by ‘“knowledge engineers” of educational knowledge–creation’, a cache of teachers’ professional know–how by trial and error ‘tinkering’ (Hargreaves, 1999, pp. 125, 130, 133) since what counts as ‘working’ will vary with the value system being relied upon (Winch, 1974, pp. 898ff., 903). Allegedly ideology-free, ‘scientific’ conceptualisation, then, is laundered ideology, while all the time critics are dismissed as pre- or anti-scientific ideologues.

Concepts and their implications

I turn now to my remaining neglected topics—how philosophising, in restructuring the conceptualisation of educational subject-matters and procedures, can and should change the direction of methodology.
The role of philosophy: two mistakes

The above closet philosophical view of the authorities can justify its hegemony only if philosophy of education can be cast in the role of a practice-neutral, optional extra—reflection on a kind of first-level theoretical knowledge. This would encourage the conclusion that philosophy is parasitic upon that domain, is thus logically precluded from making any practical contributions to it, and is confined to the role of (usually self-appointed) ‘clarifier’ of everyone else (as in, for example, Smith, 2002, p. 675). As institutionalised, ‘education’, with its courses, examinations, degrees, textbooks, journals, research and professors, is certainly made to look as if it is intended to function like many other typical university ‘subjects’, mathematics, science, history and so on—worthy of study in its own right. One can take degrees in it without these being thought to confer any practical competence, and research in it aspires to contribute to a steadily accumulating corpus of knowledge with, quite possibly, no or no known practical implications.

There are several reasons why ‘education’ cannot be construed in this way. First, since it is concerned with increasing understanding, it must in principle involve all subject-matters such as the above that constitute that understanding. Furthermore, much of the ‘subject’ as found still consists of disciplines—psychology, sociology, philosophy etc.—‘of education’. But there are no specified dividing lines between these and their ‘mainstream’ parents, so all of the latter could also potentially figure in the subject. It is not clear, then, that there are any a priori limits to what could find a niche in education so characterised, nor what a professor of education is a professor of exactly. There cannot be a philosophy of an object domain if that domain cannot be individuated. Second, we have seen that education is not a phenomenon at all—its presence or absence is relative to the values of the observer. It could not, then, be knowledge in the sense that we have been discussing so far. Finally, it is incoherent, because circular, to conceive of philosophy of education as reflection upon an object domain when it is also included as a constituent of that domain.

So, is philosophy of education an applied philosophy, then, as some (e.g. White, 1987, 1995) have proposed? We all know what it is to apply glue or paint, but what is it to apply philosophy? We have already found problems with what philosophy might be applied to. But there must also be something that can be applied. Other disciplines that are said to be applied—linguistics, behavioural analysis, developmental psychology and so on, have the advantage of findings that are antecedently characterisable, and which they then apply in technologies as causal antecedents.

The first place where such material might be found is in what Kant called speculative metaphysics in which ‘revisionary’ (i.e. alternative reality) schemes are proposed. The other is in various ‘descriptive’ analyses mapping the necessary structure of common-sense reality. (For the distinction see Strawson, 1959, pp. 9–11, as amended by Hamlyn, 1984, pp. 4–9.) This would include analytic philosophy, the tradition in which the applied philosophy proposal has been made. The central problem here is that both of these approaches result in analyses of whatever is their area of concern. Such analyses, whether revisionary or descriptive, are established by
logical means. They do not, therefore, lend themselves to application in the way that antecedently verified empirical knowledge does. An analysis, for example, a philosophical thesis (an \textit{analysans}), cannot be applied to its instances (the \textit{analysandum}). It is already (if true) an analysis of the conceptual structure of its instances.

There is often, we should note, the misleading \textit{appearance} of application here. A philosophical analysis of ‘equality’ or ‘freedom’, say, could be claimed to have ‘applications’ to the questions of egalitarianism in comprehensive schools or freedom of children’s learning. But this is not an application in the above sense; it is merely an example of the thesis in operation that could have been cited as part of the original analysis. How is it, then, that, in the course of these applications, invalid inferences are apparently being made from higher-order analyses of educational \textit{concepts} to lower-order \textit{propositions} containing ‘guidance’ for teachers—what the ‘role’ of something is, ‘procedures’ of moral education, ‘practically-orientated work’, and so on (White, 1987, p. 158)—in other words, to propositions with ‘oughts’ appearing in them for the first time. What is the authority for these moves? Why should practical teachers take any notice?

\textit{The implications of philosophy}

Fortunately, there is another alternative to the above two approaches that has already been foreshadowed. ‘Education’ denotes not a first-level theoretical but a first-level practical domain—values that govern a specific range of things that people do, educating. Just as one can have a philosophical study of morals, so one can have such a study of the values constitutive of education. The indefinitely variable subject-matters which we have seen that this involves are united, not in being a single subject or discipline, but in sub-serving this end. Research in education construed in this way should yield practical knowledge of how to educate better, not a steady accumulation of theoretical, ‘blue skies’ findings. How can philosophy play a role in educational research, thus conceived?

Teaching is intentional—one must teach something—and the teacher must see what is being taught under some description, the teaching’s intentionality.\textsuperscript{10} This description is a philosophical characterisation of the subject-matter in the sense which we have already identified when discussing values. Sophisticated forms of these characterisations are the philosophies of these areas, but prototypes of them are implicit and usually unrealised in the practice of all non-philosopher teachers. This teaching initiates learners into the subject-matter’s constituent concepts and procedures, so teachers, then, need to direct the learners’ attention to the place where these concepts are instantiated. Since this ‘place’, with its distinguishing methodology, varies with the philosophical characterisations of the subject-matter subscribed to, the characterisation should directly influence teaching methodology. Different conceptualisations of her situation, then, place varying and direct (i.e. immediate, not mediate) logical pressures upon teachers’ intentionality, imposing the rational requirement to adopt one particular methodology rather than
another—teachers rationally ought to direct children’s attention to the ‘proper’ place (i.e. the place specified by what they consider to be the correct analysis of the subject-matter’s internal values, goods or excellence). If they are to follow the de jure version of the practice, they ought to look to that place.\textsuperscript{11}

To illustrate: when teaching children that, say, ‘stealing’ is wrong, to what is attention to be drawn? Pointing, for example, to the absence of money where money should be, whatever it teaches, does not teach the wrongness. The way that a teacher refines her methodology to enable the children to attend to and thus learn what it is that the wrongness precisely consists in depends crucially on the philosophical characterisation of morality that the teacher is working with. If she is an emotivist or prescriptivist, she will consider that her and others’ emotions or attitudes are the determining factor, and so pointing would not be appropriate; or perhaps a principle or maxim needs to be introduced under which the situation can be seen to fall; a naturalist or intuitionist would hold that the wrongness is a property that subsists in the situation in some way alongside the empirical property of the missing money, and so an ostensive procedure would then be required, and so on. If (as is usual) she just expresses disapproval of the money’s absence, then the children learn merely that certain things are disapproved of and so need to be avoided (or possibly done deliberately, if they bear a grudge). But the problem of the identification of the wrongness as such has not been broached at all, and worse, ‘wrongness’ has been conflated with ‘disapproval’.

To multiply examples: she ought not to begin science teaching with the collection of brute ‘data’, followed by the generation of some theory to explain them if observation is necessarily theory-laden; to point to the meaning via the ‘shape’ of words if meaning has to do with the intentions of the writer or the conventions that govern the signs; to provide illustrations of numbers in the form of geometrical patterns of dots if numbers are the properties of sets of entities, however disposed; to teach art by encouraging children to express their innermost feelings if art is ‘significant form’, fit only for contemplation in itself, and so on. Teaching methodology is philosophy-relative—the teacher’s procedures ought to be consistent with her philosophical views. She ought also to be similarly influenced more generally in her behaviour by conceptualisations that she has of any other aspect of her situation—different views of the nature of children, of classroom organisation, of the wider society, of children’s place in it, and so on. Conversely, her methodology will always have philosophical presuppositions whether consciously formed or not.

This relativity extends to the conceptualisations of those responsible for ‘educational policy’. The recently announced government resolve to eschew ‘an ideology-led attack on grammar schools’ and to concentrate instead on achieving ‘best results’ is a distinction without a difference; school architecture logically serving a child-centred approach will be quite different from that serving a traditional one; teachers having continually to draw implications to meet problems as they arise from their particular philosophical approach and children is in direct collision with top-down educational administration and ‘curriculum planning’; that conception also collides with the hierarchical administration of teacher training.
where ‘drop-in philosophers’ hand down ‘applications’ for novice teachers to act upon. University staff would certainly be essential to provide the necessary philosophical training, but could act only in a consultant capacity. In that capacity, philosophers of the particular subject-matter must be essential contributors to all currently over-psychologised ‘methods’ courses.

The justificatory route, then, is directly, i.e. immediately, from philosophy—any philosophy—to propositions saying what ought to be done in education, and from the presuppositions of all methodology, back again, by the inferential path that I have mapped. In any case, as we have already seen, the ‘applied philosophy’ thesis would require the implications supplement set out here to give it authority, and to become ‘enmeshed with the practical perplexities’ of education (White, 1987, p. 158).

Finally, it is perhaps necessary to clarify the claim that philosophers are needed in education to provide certain kinds of practical advice. All that they can do as philosophers is offer an analysis of a set of propositions—the philosophical descriptions of the teachers’ intentionality and those presupposed to methodologies, and the resultant implications for the classroom. To work competently they do not need to have arrived at these descriptions at first hand nor to have had any practical teaching experience themselves. Their aim here is merely to establish that the methodology, whatever it is, meets the epistemological standards of the conceptions being worked with, or possibly to develop superior alternatives. The entire weight of the philosopher’s authority in practical matters, then, depends on the strength of her analysis.

Since philosophical conclusions have implications for educating and for educational policy-making, one must suppose, then, that teachers are being denied the opportunity to learn how competently to reach such conclusions for themselves, and to follow their implications, not because such training does not have relevance to practical problems, as the official rhetoric has it, but precisely because it does.

Educational research and practice

_Educational research_

Education, being value-governed, is a transaction between persons, not a causal/empirical, law-governed manipulation of processes. Accordingly, children from the outset must be treated at the very least as proto-persons. Furthermore, they must by the exercise of their autogenous judgement come to subscribe to these values and, prior to that, form the appropriate concepts in the first place (Geach, 1957, chs 4, 5). They must also be persuaded to give their attention to the project. Consequently, there can be no causally sufficient conditions (i.e. empirical guarantees) of any educational teaching outcome for researchers to find and ‘effective’ teachers to manipulate—learners have a logically necessary contribution to make. The nature of this transaction, then, excludes the most frequently-canvased candidates for morally acceptable teaching: teaching is neither a skill, a craft, a set of techniques, a kind of expertise nor an art. Each of these involves manipulation of causal means to
ends, technical in the first four, aesthetic in the last. The proposal to run an educational system as a scientific, research-driven, ‘evidence-based’, industrial project, compiling ‘methods that work’, with education as the output is a morally objectionable muddle.

It follows that, since education is value-led, educational research must consist in substantial part in the determination of these values, and investigation of the implications for methodology that they involve. The traditional distinction between research—academic, blue skies, curiosity-driven, basic, theoretical, underpinning (high status)—on the one hand, and professional—practical, nuts and bolts, applied, (low status) (Mortimore, 1995, pp. 16–18, 1998, pp. 242–244; Hammersley, 2002, pp. 119–120)—on the other is quite false in education. All research in education, even at the deepest level, is practical, i.e. bears upon practice in the way described. The social sciences are, of course, another part of the educational research enterprise, but to be educational research (rather than mere social science) they must sub-serve the values constitutive of education—they are needed to supply facts as required. When relied upon alone, they can offer no guidance to education at all.14 This framework of values also provides the criterion of relevance—it determines what facts are needed. Without it the concept would collapse since any fact would be relevant to some educational outcome or other. The customary claim that such research is centrally concerned with the establishing of truth, either constructivist (Stenhouse, 1975; Elliott, 1991) or realist (Bridges, 1999; Pring, 2000b, pp. 144ff.) is, then, at best very misleading.

This role for social science in educational research appears unusually modest because of facts’ historical tendency to come with monolithic empirical theories attached (e.g. Piagetian, behaviouristic, psychoanalytic). These, with their attendant, unacknowledged revisionary metaphysics of mind, immediately inflate to subsume the whole, and to collide with the essentially normative nature of the entire project. This is science only in the very limited, atheoretical sense that certain technical, e.g. statistical, methodologies are used to collect the facts. Such procedures are extensions of common sense, and require no metaphysical revision whatsoever. The ‘positivist ontology and epistemology’ that we have seen SER espousing are, then, optional extras at best, and in fact conflict with the remainder of the enterprise; the ‘Kantian antinomy’ identified at the outset does not arise unless the option is taken up; the ‘qualitative’ and ‘quantitative’ approaches can now be mixed because the associated metaphysics that caused them to conflict have been dropped; the aspired-to ‘theoretical framework’ is not needed to ‘underpin’ the facts since such underpinning has to be provided by philosophy.

The relationship of educational research to practice

Teachers, of course, commonly say that they have ‘methods that work’. This claim, however, does not have the status that causal sufficiency requires. One knows post hoc that they have led to a desired result, but one does not know in the nomological sense aspired to that they will work in the future—the above necessary conditions
may be absent. A wide range of methods *could* work in the above sense; that, as I have said, would depend in part on what future unknown learners find persuasive. There is also, of course, stability in each separate social environment due to cultural continuity but this, too, does not amount to the metaphysical ‘natural necessity’ required by science. The epistemological weakness of this claim would not, however, prevent it from showing up as, and being masked by, ‘significance’ in statistical analyses.

This post hoc status precludes educational research from being ‘replicable’, ‘cumulative’, ‘generalised’, nomological, identifying ‘deep causal structures’ and so on (Hargreaves, 1996, 1997, 1999). Unlike lawyers, doctors *et al*., and contra Pring (1999, pp. 305, 308), teachers have no cache of profession-specific specialist practices, based on an *ex cathedra* corpus of knowledge, in the following of which their competence consists (though they do, of course, have institution–specific procedures, which they might be expected to have insider knowledge of since they devise them). In common with all rational agents, they are merely communicators, albeit with a particular focus and agenda. Far from being ‘best practice’, then, it would be the worst possible teaching practice—rigid, stereotypical automatism—if one had just been successfully educating one child, to proceed (as one would in engineering) to all others as if they were some kind of nomologically authorised re-run of the first, let alone a re-run of some other transaction that one has read about. Furthermore, that there is no such corpus of professional knowledge is, again, true in principle, not because of the negligence of the profession in not assembling it.

Both teacher and learner are in a value environment established by the teacher. The relationship of the facts to the ‘theory’, then, while structurally analogous, is actually entirely different from that of natural science generally, and so leads to a different epistemology of practice. In the latter, facts in the minor premiss, the ‘initial conditions’, enable the conclusion to be deduced, and so verify (or falsify) the major premiss—the generalisation or law:

\[
\begin{align*}
\text{All water expands when frozen.} \\
\text{This water is frozen.} \\
\text{Therefore this water has expanded.}
\end{align*}
\]

Practitioners (e.g. engineers) achieve technical ends by manipulating initial conditions. They depend absolutely on the empirical truth of the general law which is the major premiss. A distinction between pure and applied research is here possible, whether or not acted upon.

While educational practitioners are certainly verifying a minor premiss, it belongs to a practical syllogism of which all educational research at least in part must consist. For a very general example to exhibit the form of this:

\[
\begin{align*}
\text{It is good (e.g. fulfilling, see later) to learn X maths etc.} \\
\text{This is some X maths etc.} \\
\text{Therefore learn this.}
\end{align*}
\]

To adapt one of my more particular examples:

\[
\begin{align*}
\text{It is a valuable contribution to your education to express your deepest feelings in art.}
\end{align*}
\]
You have lots of deep feelings.
Collect your painting materials from the cupboard.

Or,

Let’s do some painting.

The major premiss here—a value claim not an empirical truth—in contrast to the scientific case, is not supported by the conclusion, and so this, and other such conclusions, cannot contribute to the research corpus proposed. It, and its implications, must get its support antecedently in the kind of philosophical investigation that I have been describing. The conclusion, that follows from the philosophical thesis together with the situational minor premiss is, again, not an empirical truth but at the very least a resolve, disposition or recommendation to action, if not an action itself (MacIntyre, 1969, pp. 52ff; Ackrill, 1973, pp. 28ff.) Its ‘strength’ derives not from causal forces that the research has tapped into, but from the strength of the evaluation to be found in the major premiss which is logically transmitted to it—what Audi calls a ‘purposive chain’ (1991, p. 33)\(^{16}\)—and the persuasiveness of which must be transmitted to pupils. The distinction between ‘pure’ and ‘applied’ research is here logically unavailable. This confirms our earlier finding that there is no such thing as pure educational research.

Because of the centrality in education of the internal values, ‘goods’ or ‘excellences’ of the understanding, the indispensable concept in achieving ‘effectiveness’, then, is not cause but virtue (Carr, 2001, p. 461). As they begin to engage further in its practices, with teachers using any means of communication that suit the particular individuals involved (Hargreaves’s ‘tinkering’ without the nomological ambitions), and following the implicit logical connections, learners need to be persuaded to satisfy what can now be seen as these practices’ constituent virtues—to accept their imperatives (as revealed by philosophical analysis) in each context-specific way. It would need to be pointed out continually to their second-order desires that to seek the ends of understanding but to fail to employ the logically necessary means is incoherent and self-defeating (MacIntyre, 1985, p. 188). The explanation of why pupils learn things in this situation is not deductive–nomological. It is that they perceive them as satisfying certain values to which they have been persuade to subscribe—they have become imbued with the virtues that are the constituents of that subject–matter. That the conclusion of the practical syllogism becomes motivating \textit{is} in substantial part what their education consists in. Student commitment to \textit{some} educational end is the \textit{sine qua non} of all educational progress. The logically first move is to get learners on to the educational train.

Empirical conditions are also indispensable here, of course, but in nothing like the distorted form prized by ‘educational research’. ‘Our identity’, argues Taylor, ‘is defined by our fundamental evaluations’ (1985b, p. 34). Teachers, then, in their educational transaction, must familiarise themselves and empathise with, support and of course try to influence the deepest (autogenous, idiographic, non-replicable, non-cumulative, culture-laden and changeable) aspirations of their pupils, what they really \textit{care} about—their second-order desires ‘to be a certain kind of person or
to achieve certain results or values’ (Gewirth, 1998, p. 19). To do this, they need the ability and willingness to enter into a sympathetic, patient relationship which enables the particular kind of nurturing that is education. These are second-order virtues of the practice of teaching itself that in the transaction govern the virtues of the understanding involved. They are summarised by Dunne as ‘perceptive care’ (2003, pp. 355, 368).

It seems that the conceptually similar *phronesis* has become conflated with teaching because of an ambiguity in our means–end way of thinking which leads Carr to appear to flatly contradict the view of Dunne already cited: ‘The phronetic reasoning of Aristotle is of a relatively simple means–end kind and as such it is hardly distinguishable from technical or prudential reasoning’ (1991, p. 244). The two senses of ‘instrumental’ conflated here are (1) identifying the efficient cause of an outcome (*techne*), e.g. jogging to get fit; (2) considering what the end, e.g. the honourable or honest course, consists in in a given situation. If *phronesis* is instrumental, then it must be in this latter sense: ‘its chief purpose is … to deliberate with respect to questions about how the virtues in general or virtue in particular might receive appropriate expression in this or that set of morally problematic circumstances’ (Carr, 1991, loc. cit. See also Dunne, 1999, pp. 51ff.) We can now see that the job of the teacher, as an extension of her personal *phronesis*, would be to perform this service for pupils, now her moral responsibility, additionally across what we have seen are the virtues of the understanding. The ‘separately identifiable outcome’ of teaching—the appearance of ‘instrumentality’—is achieved, in so far as it is achieved, by persuasion, which, of course, is not an efficient cause, not a *techne*.

‘Perceptive care’ is exactly what the causal skills approach precludes—relationships between autonomous individuals are converted by the deployment of skills (instruments is sense (1) above) into manipulation of one side by the other. These virtues, again in contrast to skills etc., to gain purchase as such, must be pursued intrinsically (MacIntyre, 1985, p. 198), and are then logically not empirically necessary to the achievement of the *telos* of each practice. They are what the practices properly consist in, and securing their satisfaction is what ‘effectiveness’ means here. Teachers, of course, to furnish possible multiple minor premisses in the above practical syllogism, need also to be informed, through empirical research where necessary, of all the facts obtaining in the pupils’ current situation. It should be stressed that the above analysis sets out a logical, normative, not a temporal and certainly not a causal sequence. It has nothing to do with psychology.

It remains for me to highlight the destructive clash between causality and autonomy that has emerged here. Because of the logically necessary contribution of the pupil to the teaching transaction, the causal sufficiency thesis conflicts with learners’ personal agency. Autonomy is partly constitutive of such agency (Dworkin, 1988, p. 32), and is thus bypassed. This has two consequences. First, autonomy is necessary for the attainment of virtue. The causal thesis must therefore subvert education. Second, autonomy includes the ability to form the second-order desires necessary to learners’ self-fulfilment (Gewirth, 1998, pp. 38–40). The causal thesis, then, also conflicts with this aim. One could restate this by saying that it undermines
the development of the *phronesis* of learners. It is hardly necessary to point out that there is a threat to the fundamental human rights of children in the view of educational research currently in the ascendant.

**Conclusion**

There are two radically conflicting and mutually exclusive options before the education system that interfere with each other at all levels: first, as now, we have the attempt to maximise ‘knowledge’ in the school population, citing the *ignis fatuus* of an ideology-free database of scientifically-proven ‘methods’ as a justification for authoritarian control of the means. Alternatively, we can have the facilitation of the autogenous personal development of children, with the ends that are pursued treated as emergent, but of course philosophically defeasible, and those who have (quite legitimate) worries about the needs of the economy being limited to persuasion. With this goes abandonment of any fundamentalist *Code Napoléon* conception of educational research, and tolerance of disparate ‘ideological’ groupings and even individuals who, as a result of current success, have for the moment earned the power to do things their way. This choice is not compelled by science—it is itself ideological—but none the worse for that, provided that it is defended as such.

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**Notes**

1. Hume, *Treatise on Human Nature*, ed. Selby-Bigge, bk.1, sec. xiv, pp. 155ff. The qualification is important. There are other concepts of causation that enable one to explain the inception of behaviour (MacIntyre, 1971, sects v, vi; Ryan, 1970, ch. 5) but which are not involved in this argument.
2. There is, then, contra Pring (2000a), a ‘dualism’ here between ‘quantitative’ and ‘qualitative’ approaches. As we will later see, ‘qualitative’ does not necessarily have the subjectivist, relativist characteristics that Pring finds in it.
3. The clash between explanations of behaviour in terms of mechanism and purpose is usefully discussed in the symposium on ‘The Explanation of Purposive Behaviour’ by C. Taylor and R. Borger in Borger and Cioffi (1970).
4. The main advocates of *phronesis* as an alternative characterisation of teaching have, of course, been Carr and Kemmis (1986), who have combined it with critical theory. I have examined this approach in Clark (2001). Action researchers who follow Schon do not rely on critical theory or *phronesis*, but their conception of educational research is also based on ‘spirals of action reflection’ (McNiff, 2002, p. 58). I return to this later and at note 17.
5. It does not seem to have been realised by the positivist educational lobby that its stance, too, amounts to an institutional suicide note. If educational research reduces to mere social science, then we do not need dedicated departments of education to conduct it. Any social science department will do. Conversely, most, possibly all undedicated existing social science will already be relevant to some educational outcome or other.
6. Contra White (2000, p. 699), there is, then, an essence of education in the sense at least of a logically necessary condition, which is all that I require.

7. I am talking here of rival characterisations of the same subject-matters. These are additional to any categorial distinctions that there might be between subject-matters in terms of which they would be distinguished from one another.

8. It is usual for those bent on ‘rigorous’, ‘scientific’ investigation to sweep aside debate about the respective merits of these as pre- or anti-scientific ‘dogma’ or ‘ideology’, or to treat them as different ‘styles’ of teaching, the effectiveness of which awaits empirical investigation. For example, Bennett considers that scientific research is in the process of settling such disputes, and that anyone who so much as raises the ‘progressive’ versus ‘traditional’ controversy must now be regarded as a ‘brain-dead pedagogue or knee-jerking ideologue’ (1988, p. 25). See also Mortimore (1988b, p. 15) where it is agreed that ‘scientific research’ is rendering such debate ‘sterile’, Sammons and Reynolds (1997, p. 134), where ‘reliance on evidence rather than ideology’ is advocated, and Reynolds where the ‘fads, fallacies and policy and practice fantasies’ of those who disagree, are deplored in favour of views formed ‘on a scientific basis’ (1995, p. 59), and where psychotherapy is commended to deal with this ‘abnormality and pathology’ (p. 68).

9. Berlin argues that political philosophy is possible ‘only in a world where ends collide’. Where they do not, investigation will be confined to means (1969, sect. II, pp. 149ff.) We can add that where, as in education, attention is confined to means, ends are being taken as settled. Hargreaves gives us fair warning. In his new republic, ‘[Teachers’ professional] knowledge creation with its emphasis on knowledge validation, eschews a “do as you please” philosophy and insists on a tightly focussed and disciplined framework for the development and diffusion of high-quality professional practices’ (1999, p. 141).

10. This applies to teaching the subject; it does not apply to merely working with it. In the latter case you just follow its rules. For example, if it is mathematics, you just perform the calculation. See Clark, 1989, p. 245.

11. I have argued for this thesis in more detail, and in another context, in Clark, 1989, pp. 246ff.

12. I am grateful to Mike Degenhardt for this piece of Australasian terminology.

13. The ‘critical social science’ proposed by Carr and Kemmis (1986); Carr (1995) as an alternative to causal manipulation in this context offers us ‘emancipation’ from distortions of ‘ideology’, ‘irrationality’ etc., but turns out to be vacuous when it comes to helping us to decide what ought positively to be done (Clark, 2001). I am substituting teachers’ practising the implications of the conclusions of their philosophising for ‘critical social science’. This would be a paradigm case of reflective practice. Philosophy itself, of course, has a number of different characterisations (Hartnett & Naish, 1976, vol. 2, pp. 139–164). The present thesis appears to be neutral with regard to these.

14. Problems arise even if the SER genre is confined to the mere collection of necessary facts. Some connections between teaching and learning are logical (Peters, 1973, p. 241) and some at least of those claimed as empirical discoveries by SER appear to be so (Elliott, 1996, p. 206; White, 1997, pp. 43–46). SER researchers have remained uncomprehending of this kind of point, assimilating it to ‘common sense’ and ‘self-evidence’ (Mortimore et al., 1997, pp. 182–183; Sammons & Reynolds, 1997, p. 126; Sammons, 1999, p. 216).

15. This essentially Kantian feature of scientific knowledge—the principle of the uniformity of nature—has been variously referred to as an ‘imputation’ by Rescher (1970, pp. 105ff., 1973, pp. 55ff.) Popper calls it ‘faith in laws’ (1972, p. 278), and ‘the structure of the world’, (1972, pp. 422, 432, 438). Its categorial status has been proposed by Walsh (1968).

16. The logical relationship between values and action generally has been clearly set out by MacIntyre, (1969), and by Nowell-Smith (1957) under the headings of ‘contextual implication’ and ‘practical/theoretical’. A comprehensive discussion is Audi, 1991, pt 2. A substantial number of the problems in the relationship between so-called educational theory and practice can now be seen as part of the ‘Socratic paradox’—‘weakness of will’,
**akrasia**—as extended by, for example, Davidson (1980, 1982) into rationality in general and the wider concept of rational ‘incontinence’.

17. This point also removes as sources of educational research the traditional opponents of the positivist project that I am targeting—‘the self-reflective spiral of cycles of planning, acting, observing, and reflecting [that] is central to the action research approach’ (Carr & Kemmis, 1986, p. 162), and Stenhouse’s ‘experimental’, Popper-inspired ‘research model’ (Stenhouse, 1975, chs 9, 10; Elliott, 1991 pp. 73ff.) in so far as these are intended to result in counterfactually reliable ‘educational science’ comprising ‘general propositional theory’ (Stenhouse, 1975, pp. 142, 157. See also Elliott, 1991, p. 74).

18. An analysis of ‘self-fulfilment’ in terms of ‘ones deepest desires’ or ‘one’s best abilities’—called aspiration–fulfilment and capacity–fulfilment respectively—on which this conclusion is based, is to be found in Gewirth, 1998, p. 60. In particular, no egoistic thesis is intended here. See sects 3.4–3.7. This thesis fits very nicely with the conception of virtue as an ethics of aspiration rather than of obligation (Carr, 1991, pp. 225–226, after R. Taylor, 1985).

**References**


