



Making Sense of Data: Objectivity and subjectivity, fact and value

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Abstract: *Data can seem to be the very foundation of research, the sine qua non of enquiry into education. Yet this thought can be troubled by questions about the provenance of data or about how something comes to be constructed as data in the first place. And most researchers face questions about what to do with data when it arrives—where, in the social sciences more than the physical sciences, results of tests rarely show conclusively what to do next, and where, in light of this, interpretation comes to the fore. The present essay discusses problems of objectivity and subjectivity, and of fact and value, as these arise in relation to these matters. The idea that the mind is more or less separate from the body and the idea that there is a realm of fact distinct from the realm of value in many respects laid the way for contemporary notions of objectivity and subjectivity, not least in the social sciences. Yet both are now widely discredited. The present discussion will illustrate the nature of the reappraisal that, in consequence, is needed. The argument that unfolds will help to reveal the need for a reorientation of education—in research, policy, and practice—such that the role and importance of the exercise of judgement is better understood. There are implications here for research methods training and for the funding that facilitates responsible enquiry into education.*

Keywords: *data, fact/value, subject/object, objectivity, humanities, educational research methods.*

PREAMBLE

This essay purports to discuss to role of data in educational research, broaching questions of objectivity and subjectivity, of fact and value. Already this seems too much, and so the question arises: where to begin? Surely what is needed is a clear presentation and analysis of the various theoretical frameworks and epistemologies that are available. So one might think, first, in terms of the kinds of theoretical

framework that might be harnessed to this enquiry: positivism, interpretivism, symbolic interactionism, phenomenology, critical inquiry, feminism, and postmodernism—to give a reasonably representative list (see Crotty, 1998). Consideration of questions of fact and value must, in similar fashion, address directly the various positions that are available in epistemology, including objectivism, constructivism, and subjectivism. Ideally this would extend into the consideration of



developments in second generation cognitive science (Lakoff and Johnson, 1980, 1999). Moreover, all of these positions admit variations, and it is surely important to be clear about their differences. In fact, a clear tabulation of these different positions may help in the mastery of this difficult theoretical field and put our enquiry onto more secure foundations. All this seems indispensable before we address the question of the data we are to collect. And in fact this last question splits into at least two, because there is a preliminary question about what is to count as data for our research and a subsequent question about how we are to address the collection and analysis of that data. The questions interconnect. All-in-all, then, it seems that so much work needs to be done before we can embark on our project.

Now in a limited sense this is right. As any accomplished researcher knows, the idea of simply going out and collecting data makes no sense. “Collect data” or “gather evidence” means nothing unless we know what kind of data or evidence we are looking for, and that depends upon what our topic is and the kinds of questions we are asking. This, I take it, is uncontroversial. But to phrase the problem thus is to risk missing a more fundamental barrier to thinking well. In the complexity of this assembling and classification of theories and epistemologies, which is recommended by most leading handbooks on educational research, there is the sem-

blance of a rational, scientific approach, and this appears to legitimate what then counts as data and the way that data are understood. This covers over more profound questions, and these need to be addressed in less technical terms.

So let us begin again.

DATA APPEAL

Our starting point is data—if, that is, data *can* exactly be a starting-point.¹ Is anything ever just given? Data can seem to be the very foundation of research, the *sine qua non* of enquiry into education. It hides also a certain rhetorical force that attaches to data talk. For some researchers it is data and its handling that provide the very lexicon of their *métier*, the familiar materials of their craft, grist to the mill of programs and processes through which they have established their expertise and position. It becomes difficult to think outside its terms. Yet thinking in this way can also be troubled by questions about the provenance of data or about how something comes to be constructed as data in the first place. And most researchers face questions about what to do with data when it arrives—where, in the social sciences more than the physical sciences, results of tests rarely show conclusively what to do next, and where, in light of this, interpretation comes to the fore.

On research methods courses much effort is devoted to becoming clear about

¹ For a discussion of Wilfred Sellars’ idea of the “myth of the given” and for wider development of this theme, see Standish (2001).

different kinds of data, about how data are gathered, and about their appropriateness to different research purposes. The gathering of data is quite commonly presented as an essential basis for enquiry into educational practice. Indeed, some will claim that research without data is simply not legitimate.

Perfectly reasonable distinctions are drawn early on between quantitative and qualitative data, and novice researchers are encouraged, whether explicitly or at a more tacit level, to identify with one or the other approach. In consequence of the importance that is attached to researcher identity, this division of labour quickly becomes ideological (Stone, 2006b). The ideology is fuelled by various factors. In the first place, it is fuelled by the seemingly greater proximity of quantitative research to work in the physical sciences, under whose shadow social science often understands itself. It is in this light that ideas of objectivity, validity, and rigour tend to be constructed. In the second, there is a corresponding wariness about the exercise of judgement and the direct consideration of questions of value. In the third, there are the practical benefits and kudos that attach to winning research funding, where quantitative studies tend to be larger scale and hence to be awarded sums of money that catch the eye. In the light of these factors, it is no accident, but still a serious mistake, that the “medical model” has become dominant.

Such views are often based on apparently common-sense principles. The idea that the gathering of data is fundamental

to research in education is based on the view that any form of enquiry and any argument must rest on foundations. There must be a starting point, a rock on which to build. Foundational thinking, it may be supposed, is necessary for clear thought of any kind, and this can be seen in developmental terms. Don't we learn that $2+2=4$ before we learn more complicated arithmetic? Don't we learn to count even before we learn this? And is it not true of all ways of thinking that there must be first steps upon which others are built? So our route in combating some of the assumptions embedded here needs to be more indirect. What is at stake can fruitfully be approached by way of the problems of objectivity and subjectivity, and of fact and value. Where does this lead?

The idea that the mind is more or less separate from the body and the idea that there is a realm of fact distinct from the realm of value in many respects laid the way for contemporary notions of objectivity and subjectivity, not least in the social sciences. Yet both are now widely discredited. The present argument seeks to illustrate the nature of the reappraisal that, in consequence, is needed. The argument that unfolds will help to reveal the need for a reorientation of education—in research, policy, and practice—such that the role and importance of the exercise of judgement is better understood. There are implications here for research methods training and for the funding that facilitates responsible enquiry into education.

The idea that the mind is more or less separate from the body, and the “scientific”



or abstract understanding of the mind that this encourages, owes much to the revolutionary thought of Descartes. The idea that there is a realm of fact distinct from the realm of value is one that the philosophies of David Hume and G.E. Moore strongly encouraged. Both ideas laid the way for contemporary notions of objectivity and subjectivity, not least in the social sciences, and yet both are now widely discredited.² The present discussion illustrates the nature of the reappraisal that, in consequence, is needed.³

PROBLEMS WITH FOUNDATIONS

A problem with foundations, however, is where we are to find them, and this has been a source of perplexity through the ages—for scientists, historians, philosophers, theologians, and religious believers. “What is the basis of your claim to know?”—this seems like a very reasonable question. But what if we cannot answer it? The worry that there might not be any foundation to our claims to knowledge

has crystallized as the problem of scepticism. Although questions of scepticism are, in a sense, as old as human kind, and although they are certainly there from the beginnings of philosophy, they acquire a new and particularly intense expression in the work of René Descartes. They become the abiding concern of epistemology in the modern era, shaping not only its subject-matter but also its methodology. Descartes’ innovation was in part the adoption of a method: the method of systematic doubt. This method proceeded by rejecting any proposition that could be doubted. How do I know there is a table in front of me? I have evidence from my senses. Yes, but this seems also to be the case when I am dreaming. So how do I know I am not dreaming. . . How do I know that there are other people? Well, I see them, speak to them. Yes, but this also is the case when I am dreaming. . . Yet, as is now familiar enough—such is the power and influence of Descartes’ work—I cannot doubt that I am doubting: I cannot doubt that I am thinking.

² There can be something stubbornly persistent about philosophical ideas. They begin in a philosopher’s study but then have significance that extends through other fields, with trail-effects in popular conscientiousness. Descartes’ legacy is in part a Cartesianism in the thinking of people who have never heard his name (see Standish, 2012).

³ It goes without saying that the problems identified here do not arise only within the study of education! They are there in the social sciences, most obviously, but it is also the case that the development of the physical sciences is less linear and more troubled than is commonly imagined. For example, questions of taxonomy are not settled only by the gathering of data but involve the kinds of disputes illustrated by the “lumpers and splitters” dichotomy (see Standish, 2017). Paradigm-shifts have often involved a disturbance of the fact/value divide or an issue of ontological relativity, and hence the boundary between the physical and the social sciences is in some respects more blurred than some have thought. This is not to deny the profound difference that is identified in, for example, Peter Winch’s *The Idea of a Social Science* (1958), to the effect that research in the physical sciences is conditioned by the vocabulary of the scientist’s discipline, whereas research in social science involves the vocabulary social scientist’s discipline in relation to the self-interpreting vocabulary of the research subjects themselves. I set aside here the complexity this occasions.

Cogito ergo sum. In a way the significance of Descartes' conclusion is not so much in its substance, which has of course been challenged in many ways, as in two further factors: one is its tacit endorsement of the separation of mind and body, which later will collude with the rise of science in a dualism that has characterized Western thought, surely to its detriment in many ways; the other is its underwriting of foundationalism, the belief that there must be a foundation to our thought.

The collusion of Cartesianism with the rise of science in the ensuing centuries is surprising in one respect, as will be seen, but it can be understood more readily in terms of what we might think of as the spectatorial stance.⁴ The spectatorial stance is encouraged by, first, the idea that fundamentally we are minds with a contingent relation to the outside world and, second, the practice of examining the world through a lens—most obviously that of the microscope or telescope. Such instruments illustrate the way that in scientific observation the human being is distanced from the world. In such distancing the sense of sight becomes dominant over the other senses. Hence, the senses of touch, smell, and hearing that normally condition our being in the world are suppressed. Whereas these other senses are characterized more by ways in

which we are affected in relation to the world, the nature of the sense of sight is such that it belongs more naturally to our deliberate engagement with the world—as we turn our head, focus our eyes, fix our gaze. While we cannot close our ears or cease to be affected by the temperature of the room we are in, we can close our eyes.

SUBJECT(IVITY)/OBJECT(IVITY)

The kind of physiological shift that is described here, with this new prioritization of sight and separation of mind and body, was accompanied also by changes in social structures and different kinds of political relationship, through which it became increasingly possible to see the human being as a free agent. The individual was no longer fixed in a social position, as in feudal societies; the divine right of kings gradually lost influence with the rise of more democratic forms of association; and the authority of the church was partly displaced with the new confidence in human reason. Charles Taylor identifies the 18th century as a crucial period in respect of there developing a sense of the human being as a being with inner depths, to which reference should be made in determinations of the good (Taylor, 1989, 1991). If the primary focus of this is in the work of Jean-Jacques Rousseau, it receives

⁴ Of course the story is more complicated than is indicated here. In particular, the understanding of science associated with Francis Bacon can be seen to lay the way for the approach to experimentation that rapidly gathered pace (see Smith, 2006). Moreover, it is true also that the development of science over the past one century especially has profoundly challenged naïve assumptions about the detachment and neutrality of the “observer”. This should not be taken, however, as the means to underwrite the subjective relativism that has sometimes come to the fore in social science.



ample elaboration in the philosophy of Immanuel Kant. Kant's emphasis on the "moral law within" gave impetus to notions of self-rule—that is, the idealization of autonomy, a notion that is transferred from the political sphere (the autonomy of states) to the personal. Thus, there was a further strengthening of the sense of the contingency of human relations to the world.

Taylor revisited the central argument of his monumental *Sources of the Self* (1989), in order to present its central ideas in more concise form, in his later *The Ethics of Authenticity* (1991), and reference to this can clarify what is being said here. He identifies the way of thinking in question as something relatively new and peculiar to modern culture. It brings together the individualism of disengaged rationality, associated with Descartes, with an idea of responsibility for oneself, derivative of John Locke, in which the individual comes to be seen as prior to social obligation. This picture is complicated by the new legacy of Romanticism, with its greater emphasis, in the work of Johann Gottfried Herder, for example, on the ties of community. While this laid the way for contemporary ideas expressed in such phrases as "being true to oneself" and "self-fulfilment", these modern notions of freedom came at a price. The earlier orders of meaning, in which the human being found a place, now were eroded in what has been called a process of disenchantment, the benefits and costs of which have

continued to be a matter of debate.⁵ The orders Taylor refers to "gave meaning to the world and to the activities of social life. The things that surround us were not just potential raw materials or instruments for our projects, but they had the significance given them by their place in the chain of being. The eagle was not just another bird, but the king of a whole domain of animal life. By the same token, the rituals and norms of society had more than merely instrumental significance. With it, things lost some of their magic" (Taylor, 1991, p. 14).

But the in many ways negative effects of the neutralization of what is outside us had the mostly positive correlate of this inward turn. Taylor continues: "This is part of the massive subjective turn of modern culture, a new form of inwardness, in which we come to think of ourselves as beings with inner depths" (p. 37).

One might think of these factors as promoting changes of metaphysical and ontological kinds. In terms of metaphysics, it is worth considering, for example, the way that *things* become *objects*, where the former term connotes an everyday interaction with things, while the latter, Latinate, and slightly more technical term suggests the abstract contemplation or instrumentalization of something by a detached subject. I make this point with reference to English, where differences of this kind are often related to etymology: words drawn from Latin and Greek are often more technical, those from northern

⁵ For a discussion of disenchantment related more closely to education, see Standish, 2016.



European roots more domestic and everyday. As an example, consider the relationship between “handle” and “manipulate”, both words refer, literally or metaphorically, to control by the hand: but to say of someone that she is good at handling people is quite different from saying that she is good at manipulating them! Such a difference in vocabulary will not of course be replicated exactly in other languages, but the kind of difference there is between “thing” and “object” can usually be found. So what follows from this?

Whereas once the world had been thought of as the handiwork, even the book, of God, now the world becomes neutralized or disenchanting. Whereas once, say, in ancient Greece, the world (or in a sense “nature”) was understood as dynamic and interwoven with human life and meaning, it now becomes a source of “raw material” and “natural resources”, which fits the demands of a more exploitative mode of human being, committed to subjugating the earth to its needs. Hence, in more ontological terms, the human being becomes detached from the natural world—acting on that world, manipulating it, and controlling it, and progressively out of harmony with it. While there is no way to step outside the world and outside history in order simply to pass judgement on these different ways of being, it is reasonable to note a trend that was at work that amounts to a kind of error, for the changes generated a blindness to certain effects of human action. There was a change in the way human beings understood themselves, their relations to

the environment, and their relations to each other, sometimes with dehumanizing effects. We do not need to stand outside history in order to see not only consequences in environmental despoliation but also a destabilizing or undermining of the sense of meaningfulness. Charles Taylor (1989) speaks of the world of medieval Europe as a semiological world—where meaning was, as it were, already written in, and the question of its value could not arise.

It is important that with this change to the modern world, this sense of inherent meaning disappears, and the world comes to seem neutral and inert. It is particularly because of this that the term “disenchantment” is apt. It would be absurd, in response to this, to seek a return to pre-Renaissance ways of thinking, in effect to deny the achievements of science. Enlightenment is possible, and science is a major factor in its achievement. It is, however, possible to recognize a depletion in modern world-views, along the lines indicated above.

FACTS AND VALUES

One aspect of that depletion concerns the nature of value and its place in the world. The distancing described above, and the neutralizing of the earth as natural resources have the effect of prising values and the world apart. With these changes there comes also a separation of fact and value. Facts are out there: they are found in the everyday deliverances of our senses; and they are revealed in greater



complexity through the experimental procedures of science. Values, by contrast, are nowhere in evidence. They are nowhere, that is, without some addition from human subjectivity, a conferring of value on things in an otherwise inert, meaningless world. In light of this, values are taken to be primarily “in the mind”. They contrast with a world of facts, which is “out there”. This at least was the assumption that prevailed through much of the modern period. In some ways it continues to prevail, as we shall shortly see. But, first, let us trace the way that this view was consolidated.

For a start, it is important to acknowledge that, while the philosophy of Descartes had taken the foundation of reason to be within the mind, there was a turn, boosted by the rise of science, to the view that all our ideas are derived, directly or indirectly, from the deliverances of our senses—a view found especially in the work of Thomas Hobbes (1588–1679) and John Locke (1632–1704). In epistemology, the former way of thinking is referred to as “rationalism” and the latter as “empiricism”. While Descartes had in effect hardened the idea of a mind-body separation and an inner-outer divide, Hobbes and Locke turned attention more emphatically to evidence coming from outside.

One classic expression of the relation between facts and values, which takes forward these lines of thought, is to be found in the Scottish philosopher David Hume’s *Treatise of Human Nature* (1739). Hume tries to show what he sees as a familiar problem in reasoning when facts and val-

ues are confused. At first sight, Hume’s account has some plausibility to it. You think you are discussing something in objective terms, and then someone brings what are clearly value judgements in, such that this seems to stand in the way of a rational appraisal of the situation. Hume’s position was not that we should not discuss matters of value, and indeed he devoted much time to doing so: it was rather that the kind of reasoning that was needed for this was of a different order from what was needed when discussing, for example, the physical properties of things. The neat slogan that is associated with Hume’s view is as follows: “You cannot get an ‘ought’ from an ‘is.’” This is open to interpretation in various ways, but it is usually taken to mean that no evaluative conclusion can be drawn from any set of purely factual premises: the facts by themselves do not tell you what you should do. A more recent expression of this position is to be found in the work of the early 20th century Cambridge philosopher, G.E. Moore. Moore argues in his *Principia Ethica* (1903) that if someone confuses “good” with any natural object whatever, then there is reason for calling that the “naturalistic fallacy”. “Natural” here would include those physical properties of things referred to above, and in general would apply to aspects of the world that persist regardless of human action. Of course, human intervention may change the way things are radically, as we see all around us, but the changes that are made are dependent upon the laws of physics or chemistry, for example, and these persist



unaffected by whatever human beings happen to do. Thus, the naturalistic fallacy can reasonably be referred to, as we saw, as the (supposed) fallacy of inferring an “ought” from an “is”.

As already acknowledged, this has a superficial plausibility to it. It rightly sensitizes us to the fact that sometimes people will pass off their own preferred judgement as if this were merely descriptive of the way things are—as if they were simply stating matters of fact. There is a surely a duplicity in this, though there are still different possibilities here: the speaker may be setting out to deceive, or they may themselves be in the grip of a particular view such that they themselves have already been deceived. The classic use of “ideology” is intended in part to imply this second sense—a self-deception in which we more or less happily acquiesce. So the dangers here are real enough. Yet we cannot leave matters as Hume and Moore express them. Although this way of thinking gained dominance during the Modern Period in philosophical thinking, and although this then extended through other disciplines and came to pervade what people took to be common sense, in many respects there is reason to call it into question.

Let us look more closely at what the supposed naturalistic fallacy is. A textbook example runs as follows:

Torturing cats causes them unnecessary pain. (A factual or “is” statement.)
Therefore, you shouldn’t torture cats.
(A value or “ought” statement.)

According to the naturalistic fallacy, this is *not* valid reasoning. To make it valid you need a further premise (italicized below):

Torturing cats causes them unnecessary pain. (A factual or “is”-statement.)

You ought not to cause unnecessary pain.

(A general value- or “ought”-statement.)

Therefore, you shouldn’t torture cats.

(A particular value- or “ought”-statement.)

So the naturalistic fallacy is based on the assumption of a *fact/value dichotomy*: facts are out there in the world; values are somehow added to this. This encourages a certain conception of objectivity (the realm of facts) and subjectivity (the realm of values). But look again at the example of torturing cats and the explanation of the fallacy.

Torturing cats causes them unnecessary pain. Therefore, you shouldn’t torture cats.

Is there anything that can be said against this? The desire for clarity of thought prompts us to seek clear distinctions. Does the distinction between factual and value statements hold up? The first statement may well already have caused doubts in the minds of some readers, as an examination of key terms will quickly reveal. Can torture be regarded as value-free? Torture is commonly thought of as an intrinsically bad thing, and hence seen in terms of value. Of course it is true that arguments can be mustered that purport to



justify torture in certain circumstances, so the idea that it is intrinsically bad can be contested. But what cannot be contested is that the very idea of torture necessarily involves questions of value. Even if we look at the concept in an instrumental way—in terms of the torturer’s motivation—it is impossible to understand what they are doing without some sense of value: they are attempting to force certain secrets out of the victim as this will enable them to overpower their enemies or find the treasure or save the planet. All these things are plainly matters of value, which is not to say that their value in this case cannot be contested or that such values necessarily legitimate torture as a means to their realization. In fact the unavoidable value aspect that we find here with the concept of torture extends also through other terms in the statement. Can we make any sense of pain without the notion that it is unpleasant? “Unnecessary” already implies something negative and, when coupled with a negative word (“pain”), something undesirable. Indeed, the sentence is something of a tautology in that the concepts in question are built into the notion of torture. Torture is the infliction of pain. Its lack of necessity might be contrasted with what one experiences occasionally at the hands of the dentist.

The point being made here comes over in a still more telling way when we think of cats themselves. What is a cat? Of course one can step out of ordinary life and provide the kind of definition that zoology might offer. But that approach to the animal typically comes—and must necessarily come—after some more everyday experience of cats or relationship to and understanding of animal life. It may be the case that we have grown up in a culture where cats are treated as pets, where they are stroked, where they drink milk, and so on. Another culture might treat them as vermin and chase them away or kill them. But these are all matters of value. What is not really conceivable is that our relationship to cats could be without this, any more than could our relationship to rats. Even if one takes an animal that figures less prominently in human experience, the very fact that it is understood as animal, as a sentient being, already places it within the realm of value.

In the light of this it perhaps comes to seem that, far from facts and values belonging to distinct realms, values go “all the way down”. This, at least, has become a common way of putting it, and it is a view that has been increasingly widely accepted over the past century.⁶

⁶ The story being told here is broad-brushed, and other lines through the literature might have been taken up. Within the early modern period there is a line of thought that derives from Baruch Spinoza that plainly opens towards a different metaphysics. Indeed, it is opposed to both rationalism and empiricism, as defined here, and Spinoza’s work constitutes an early insight into the fact that these apparently opposite positions in epistemology are in some degree steeped in a similar metaphysics. The rise of American philosophy and pragmatism, as well as the acknowledgement of Eastern ways of thinking has helped to undermine this. Within this story, John Dewey offers a powerful and subtle critique, which is of obvious importance for education. The earlier thought of Emerson and Thoreau provides a departure from the European inheritance and anticipates by a century some of the insights of Heidegger and poststructuralism.



We can still, however, imagine someone raising an objection along the following lines: “Surely,” they might say, “there are at least some factual statements that are value free. For example, oak trees have green leaves. Iron is a metal. . . . These seem purely factual and free from value judgments.” At first sight, the objection seems plausible enough. Surely these are just matters of fact. But these facts are related to, and indeed incorporate, values to the extent that they would never have been identified if they did not in some way relate to human purposes (which are, of course, matters of value). What, after all, is a tree? Like the cat, the tree can be studied in purely scientific terms, as an aspect of biology. But again this presupposes a background of ordinary experience of trees. Such a background is not hard to imagine, because human beings typically encounter trees quite early in their lives, and trees figure in human experience in a variety of meaningful ways. For a start their size, relative to the human body, means that they are readily noticeable: we can climb them, shelter under them, take wood from them, and perhaps eat their fruit. Hence they are encountered in a way that is already structured by human purposes.

Yet surely, our interlocutor may protest, trees have existed for far longer than human beings, so they cannot be dependent upon human purposes in this way. The first part of this objection is obviously correct, but the second part should give us pause. The crucial point here is that it brings us to a kind of impasse. We have ample evi-

dence that trees existed before there were human beings, but that evidence is produced through forms of enquiry that derive from our ordinary practices of living in the world. Even the correct application of the terms—in “trees have existed for far longer than human beings”—derives from and depends upon this everyday experience. Our more abstract forms of enquiry ride on the back of this ordinary experience of the world. The ordinary phenomenal world cannot be expunged from them. There is a kind of anthropomorphism in imagining the world before there was any human life, for we inevitably picture it from the perspective of the embodied human condition, with the characteristic fit between human organs of perception and the affordances of things. In other words, trees show up as big (in relation to human height), as sturdy (because we can climb them or build things with their wood), and as bearing green leaves (where greenness depends in part upon the physiology of the human eye). If our senses were different, the world would not appear the same; if we had no senses, it would not come to light at all. If we were all-seeing like God . . .—well, that *is* inconceivable: to speak of what it would look like is meaningless, because the very notion of how something looks is already dependent upon the ordinary, partial perception of human beings. On the strength of our ordinary seeing, we can perhaps try to imagine how the world looks to spiders, and possibly ingeniously constructed lenses could give us visual experience of something like this, but seeing “everything” is inconceivable. In fact, the world in its most



general and basic sense seems already to be characterized in terms of this human perspective. To repeat, we can abstract from this experience in order to view an aspect of the world in more scientific terms, and enquiry of this sort is of immense importance and value. But even the terms of science, its aim of the better understanding of things, do not make sense if it is not allowed that this is somehow desirable, as the word “better” indicates. So, once again, we can see that even where our thinking is most objectively and apparently neutrally refined, there is still this valuational dimension. What else is the *value* of objectivity?

CRITERIA AND THE EVASION OF VALUE

In the light of this argument, the idea that objectivity relates to the realm of facts and subjectivity to the realm of values is thoroughly discredited. It fact it is a dangerous idea. During the first half of the 20th century, partly through the work of the Vienna Circle, logical positivism became dominant in philosophy, and its ways spread through other disciplines and into ordinary discourse. Hilary Putnam describes its influence on economics in the middle decades of the century, with reference especially to Lionel Robbins (Putnam, 2012). Robbins had defined economics as “the science which studies human behavior as a relationship between given ends and scarce means which have

alternative uses” (Robbins, 1932, p. 16). He drew a clear distinction between “positive” and “normative” matters, arguing that the economist must study the former—what is, not what ought to be; and he saw economics as a system of logical deduction from first principles. Robbins advised governments through the time of the Depression, and so his views affected the lives of millions of people. Yet what can economic principles be if they are not already bound up with what is good for human beings, which is manifestly a question of value? Robbins and many other economists after him—he was close to the Austrian economist, Friedrich Hayek, whose thought was to become so influential with the emphasis on free market economics later in the century—have pushed this question conveniently aside.⁷

Examples of this supposed side-stepping of questions of value are evident enough in educational research, and their characteristic contemporary formulation is captured in the familiar enough phrase: “What works best?” What works best in teaching children to read? What is the best way to learn mathematics? The very idea of what-works-best has no sense, however, unless it is clear what one is trying to do. What exactly is reading? What aspects of reading matter most? And what kinds of mathematics is it best to learn? These questions are head-on values questions, and they deserve careful attention. Reference to test scores in comparative

⁷ Of course it is along these lines that criticism of neoliberal educational policy and practice can and has been developed. See, for example, Blake et al. (1998a, 1998b, 2000). For a critique of educational research in neoliberal times, see Standish (1995, 2014).



studies is a way of seeming to provide “objective” data, but in fact in the absence of consideration for what the point of learning mathematics is (both in general terms and with *these* children at *this* time), this is likely to lead to lack of clarity if not outright delusion about what is going on.

Moreover, it is not as though better practice here would simply involve determining the ends and then finding the most efficient means. Such an approach is found in attempts to plan the curriculum through the clear specification of aims, with statements of objectives derived from this and descriptions of learning outcomes purporting to test that these objectives have been achieved. The obvious attractions of this way of thinking are its tidiness, and in many walks of life this would be reasonable enough. One might run an efficient factory this way. The dangers here are most acute for education when there is an attempt to specify each of these levels of description exhaustively. This yields a means of efficient accounting, where each stage in the process can be effectively monitored and performance accurately measured. But there is nothing here to provide assurance that what is accounted for is what counts. To understand what counts, a more rigorous sensitivity to the dynamics of teaching and learning is required, as well as awareness of the dynamics inherent in a subject—and awareness of the ways that the former inheres in the latter. Inverted commas around “criteria” are warranted because the term has become a technical one—in policy, curriculum planning, the practice of teaching,

and assessment. “Criteria” have come to be understood as more or less behavioural descriptors in numbered check-lists. In the absence of such lists, there are no criteria! But this flies in the face of the ways that criteria inhere in all practices. A criterion is a standard according to which things are judged to be done better or worse, or appropriately or inappropriately; and this is internal to the very idea of a practice, to the kinds of things that human beings do. Criteria sometimes need to be made explicit, but for the most part they do not. There are criteria for sitting on a chair: this is something we do not do naturally but learn, and at various points our behaviour has probably been corrected, according to the social and cultural circumstances. So much is learned without the need for anyone to spell this out. The same thing applies in the study of a subject. What it is to study history or mathematics will not depend upon an exhaustive list of criteria but rather on certain norms of procedure, of approach and purpose and argument and attitude, and these will be passed on in good teaching without their being made explicit. Indeed the idea that this could all be made explicit is very implausible—in fact, downright confused. None of this is to deny the value of being explicit about certain criteria, and plainly this can be useful in determining grade levels when assessing students. But for the most part such criteria, if they are to avoid becoming crudely behaviouralistic, will stand in need of interpretation by teachers and examiners, where interpretation is a matter not of the teacher exercising her judgement



at whim but rather of her offering reasons for her judgement, comparing and aligning these with those of other practitioners, and developing consistencies of standard over time.

JUDGEMENT AND THE ROLE OF THE HUMANITIES

This last point is especially important because it provides a practical example of the kinds of things that good teachers do in which their judgement is at stake, and it hammers home the point that judgement of this kind is not “merely subjective” or simply “personal”. The teacher offers her judgement and attempts to give reasons as to why this student’s work is better than that student’s. Her reasons are then weighed against the judgements of others. Further reasons are given. Judgements are refined—not merely averaged out but refined in the light of argument. Through discussion a final judgement is achieved, and ideally all this is moderated by an outsider, with experience of similar courses and where the same standards should obtain. Indeed, it is through continuities of practice like this, across institutions and over time, that subjects of study are sustained. By contrast, practitioners and researchers can be mesmerized by too much reliance on data, so that the very sense of what they are trying to research falls out of the picture, with bogus conceptions of objectivity and rigour usurping the values that should be sustained and undermining the objectivity to which good judgement can lead.

What I have tried to show is that educational practice and research would benefit from a more accurate sense of objectivity and subjectivity. Crucially this will move to centre stage the importance of judgement in education. Teachers need to be prepared in a way insists in them a realization of the necessity of the exercise of judgement, and in a way that gives them growing confidence in this. That judgement will never be “merely subjective”. It must be exposed to and responsive to the views of others, and at times at least it will be appropriate for it to be substantiated with reasons. It is important that the teacher does not see this simply as a technical exercise, as if the learner were to be measured against a predetermined scale, as one measures a length with a rule. It is desirable, even necessary that she be subjectively engaged in this—that is, caught up in the practice so that getting it right matters to her, where it matters not because of pressures from an inspection regime but because of the goods inherent in education that she is committed to passing on.

Educational research, for its part, cannot rely on data alone. Some of its most important tasks do not involve the gathering of evidence but rather the direct consideration of questions of value and justification. Indeed what could “evidence” mean without some prior conception of the value in what is being researched? How could a research project legitimately begin without some prior sense of the purpose of what one is doing—that is, of why it matters and whether one has thought this



through well? There are implications here not only for research methods training⁸ but also for the substance of research and for the funding that facilitates responsible enquiry into education.⁹

The argument of this paper points towards the need for a reappraisal of the ways that educational research is understood. It implies the need for renewed recognition of the importance of the humanities in enquiry into educational policy and practice. The predominance of scientific method in the understanding of educational research—and, that is, in its

self-conception—is itself the reflection of the encroachments of scientism. The sciences and the humanities are not in competition. Both are needed. Hence, this is not fundamentally to enter into a territorial dispute, nor to claim some questions as the exclusive preserve of philosophers. It is a question of the logic of enquiry. What the humanities provide above all, however, is the means for enquiry into the value and purposes of education, including questions about the value of science itself. Such questions of value are not to be addressed by refinements in scientific method.

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⁸ For critiques of educational research training, see Stone (2006a, 2000b) and Hodgson and Standish (2008).

⁹ The argument made in this essay has been directed to questions of educational research, but it should be clear that its ramifications are much wider, extending not merely through social science but through research more generally. Even research in the humanities is liable to a kind of technicization or scientism, and this risks undoing their *ratio essendi*. In connection with the humanities, see Kwak and Standish (2014).



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